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EXXON OIL SPILL

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

EXXON VALDEZ OIL SPILL AND ITS ENVIRONMENTAL AND MARITIME IMPLICATIONS

APRIL 6, 1989

PART 1

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"EXXON VALDEZ" OIL SPILL AND ITS ENVIRONMENTAL AND MARITIME IMPLICATIONS

THURSDAY, APRIL 6, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice at 9:05 a.m. in room SR-253, Russell Senate Office Building, Hon. Ernest F. Hollings (Chairman of the Committee) presiding.

Staff members assigned to this hearing: Mike Nussman, John Graykowski, staff counsels; Bob Eisenbud, minority professional staff member; and Earl Comstock, minority staff counsel.

OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN. Good morning. The Committee will come to order. We have a very full attendance coming momentarily and we have very important witnesses on this incident and I've gotten together with our ranking member to schedule this hearing.

Good morning. We have convened this hearing to assess the impact and implications of the recent oil spill by an Exxon tanker in Prince William Sound near Valdez, Alaska. Daily, we are reminded that this is the largest oil spill in United States history. It is our responsibility as Members of the Commerce Committee to examine thoroughly the causes of the accident; to determine its short- and long-term effects on the environment as well as on the local economy; to assess the clean-up efforts by Exxon; and to determine what governmental action is required to prevent or minimize similar disasters in the future, whether in Alaska or elsewhere.

On March 24—13 days ago—the tanker, *Exxon Valdez*, struck a reef about 25 miles out of the port in Valdez, Alaska, spilling nearly 11 million gallons of oil into the pristine waters of Prince William Sound. There was a belated attempt to contain the oil, but it proved unsuccessful. Since that time, the oil has spread over more than 1,000 square miles in the Sound, blackening island beaches, covering plant and marine life, and endangering the $100 million local fishing industry. Already, Alaska fish and game officials have cancelled the herring season in the Sound—a loss of approximately $10 million.

However, the greatest losses have yet to be felt. The tanker ran aground in what is described as one of the richest concentrations of wildlife in North America. Prince William Sound is home to about 15,000 sea otters, 10 percent of the Alaskan sea otter population. Also, the Sound has a particularly diverse population of birds, fish,

and other animals—the result of a subarctic habitat which includes fresh water from melting glaciers and saltwater from the sea, a mountainous coastline overlooking sandy beaches, and pine forests sheltering productive marshlands. At least 1,000 birds are already dead or dying. Among that number are two rare species, the yellow-billed loon and the merlet. Fishermen are especially concerned about their commercial salmon harvest, as well as king crabs and shrimp. Of course, this assessment is just the tip of the iceberg.

Moreover, scientists studying the disaster are not sure of the extent of the devastation to the wildlife there. Although larger spills have occurred, this disaster is unique because it is in a body of water ringed by islands and relatively isolated from the open sea. The island enclosure in Prince William Sound has delayed dissipation of the spill, exposing animals to the oil for an extended time and allowing the oil to soak into the beaches and sediments.

The entire sequence of events over the past two weeks has raised a number of questions about the way we do business in Alaska: why was Captain Hazelwood permitted to operate a supertanker when he had prior convictions for drunk driving? Why were Exxon officials so slow to respond to the accident, and why was the Alyeska Pipeline Service so poorly prepared to respond to the emergency? Why did the U.S. Coast Guard fail to perform an immediate drug test on Hazelwood? Finally, the most important question—how can we prevent such a tragedy from happening again?

The obvious conclusion we must draw from this episode is that we are grossly unprepared for disasters of this scale. I quote the Chief of the Coast Guard Marine Safety Division who acknowledged that "federal and state contingency plans were inadequate to contain the oil spill from the *Exxon Valdez.*" This is an obvious case of the ancient maxim that those who do not learn from the mistakes of the past are condemned to repeat them.

Bear in mind that this is far from the first oil spill to impact our coastlines. Previously, one of the largest oil spills in our waters was the *Argo Merchant,* a Liberian tanker which ran onto a shoal 30 miles off Nantucket Island in Massachusetts on December 15, 1976. The tanker leaked oil until it broke apart nine days later and lost the rest of its cargo, a total spill of 7.6 million gallons. Four years later, a federal court ruled that the *Argo Merchant* had been an unsafe ship, citing general mismanagement and neglect.

In a spill just last December 22, a barge with about 231,000 gallons of heavy bunker oil spilled off the southwest coast of Washington state. Unfortunately, a heave storm pushed the oil toward land. Hundreds of miles of beaches, including pristine wilderness in Olympic National Park and Canada's Pacific Rim National Park, were covered in oil, and as many as 10,000 birds died. In that incident, the tug towing the barge had struck it while maneuvering to secure a line. Experts expect the effects of pollution from the spill to linger for years.

Outside the United States, there have been larger spills recorded. In June of 1979, the blowout of a well in the Gulf of Mexico north of the Yucatan Peninsula resulted in the spill of 155 million gallons—the largest in history.

And the largest oil spill to occur in a coastal area took place on March 16, 1978. The *Amoco Cadiz*, owned by a subsidiary of Standard Oil of Indiana, ran aground two miles off the coast of France spilling 68 million gallons. Along the Brittany coastline an oil slick formed 18 miles wide and 80 miles long. The French government paid about $100 million in cleanup costs and compensation. Last month, a judge recommended a $115.2 million judgment against Amoco Corporation, with the French government to receive $44.4 million and affected jurisdictions about $7.5 million each.

We must realize that the damage from an oil spill to the marine ecosystem is both immediate and devastating. Many birds, fish, and marine mammals are killed by the toxic aftermath of an oil spill, and all are at risk of death by starvation, dehydration, or cold due to the inability of oil-stained fur and feathers to protect against freezing temperatures.

It is my understanding that the toll on marine life from the recent disaster is expected to be so immense that the Alaska Department of Environmental Conservation has transported refrigerated tractor-trailers to Valdez to store dead birds and animals; they will be collected by scientists as evidence in anticipated lawsuits.

All of this leads us to some very important issues which must be resolved. First, at a time when this country's future share in the oil market remains in question, we must closely examine whether the Arctic National Wildlife Refuge should be explored for future oil supplies. In light of the *Valdez* spill, it is all the more urgent and important to thoroughly investigate the damage done to the fragile marine ecosystem when a calamity such as this occurs. We must have a better understanding of the short- and long-term effects on various species of plants and animals. Secondly, the question of liability coverage must be reviewed. The question are, "Who pays the bill?" "Which industries are adversely affected and how long?" "Who determines the limits on monetary compensation?" Thirdly, it is obvious that our laws are not an adequate deterrent to such disasters, or to the hundreds of accidents daily, which are the direct or indirect result of substance abuse. Why should the citizens of this country continue to be subject to the tyranny of small minds who abuse alcohol and drugs? Finally, what additional role should the federal government play in the regulation of the oil industry to prevent such events from occurring and to manage them when they do. If contingency plans are required, why are they not operational, and who should approve them?

In the weeks and months ahead, I will be relying heavily on the continuing yeoman work and leadership of Senator Kerry, Vice Chairman of the National Ocean Policy Study, and Senator Breaux, Chairman of the Merchant Marine Subcommittee, to get to the bottom of the problem. I call on all my colleagues to join me in a thorough review of the *Exxon Valdez* experience. We must work together to learn the expensive but valuable lessons of this historic tragedy.

We have the pressure of a Senate Special Session here at 11:00 a.m. and so we are going to forego—we have got 17 senators coming—opening statements, including mine, with one exception. We want to recognize the senator from Alaska for his brief comment.

The Subcommittee on Merchant Marine and Fisheries under Senator Breaux will be engaged in a follow-up hearing. And our National Ocean Policy study will also hold a national ocean policy hearing conducted by Senator John Kerry to review this issue. Mr. Reilly, the Administrator of the Environmental Protection Agency, is at another hearing right now and will be here at 9:30 and then is due to appear in the House.

So we will be starting with you, Secretary Skinner, after we hear from our colleague, Senator Stevens and after your testimony we will try to fit Mr. Reilly in them. The idea initially was that we could forego his testimony, but we wanted to have as complete a presentation and a preliminary sense of all that the Committee should be informed of at this point to see what we may do in Congress to prevent any further tragedies of this kind. Senator Stevens?

OPENING STATEMENT BY SENATOR STEVENS

Senator STEVENS. Thank you, Mr. Chairman, and thank you Senator Danforth, I appreciate your courtesy.

On July 17th, 1973 the Senate voted 50 to 49 to approve the construction of the trans-Alaska pipeline, a project delayed by four years of litigation, and sincere people in and out of the Senate disagreed on that pipeline.

On Good Friday of this year, March 24th, disaster again struck Alaska as it did 25 years ago. Most people don't realize that the epicenter of the great 1964 earthquake was Prince William Sound, too. Both of these large disasters happened on Good Friday. The earthquake was the largest ever to hit the North American continent and this new disaster, man-made, is the largest oil spill in the history of the United States.

As a result of alcohol abuse on board this tanker, carrying 53 million gallons of oil, this tanker—the *Exxon Valdez*—hit the Bligh Reef outside Valdez Harbor, as we all know, and 12 million gallons, approximately, leaked out in less than five hours.

Last night a New York judge stated that the captain of that vessel is responsible for a disaster which ranks with Hiroshima. In the very least, the spill dwarfs the 1964 earthquake. That earthquake was over in four minutes. This will be with us for years.

The effects of the spill spread terror and destruction and that continues now. The spill, as you will see now, is 250 miles from the scene of the accident. That is the same, approximately, as coming from New York to Washington, D.C.

Mr. Chairman, those of us that voted for the oil pipeline in 1973 were assured that the latest technology would be utilized to prevent oil spills. Should any occur, trained crews would rapidly mitigate any damage. Now we find the response crews were disbanded, needed equipment was either unworkable or not available.

The attempts to prevent the spill from spreading or alleviate the impact on south central Alaska have been such that none of us have confidence in what is going on. We feel almost abandoned by the Federal Government and disturbed by the lack of supervision given to the preparation of plans for disaster recovery.

All of us have a feeling of grief, as we have seen our marine life die, our fisheries contaminated, our recreation areas flooded with oil and our people and fishing, tourism, transportation and recreation forced out of work. Current law distinguishes between natural and man-made disasters and that distinction makes no sense to us, except in terms of fiscal responsibility.

Last night our governor delivered to the Coast Guard a request. It is a request—and I will just read the last paragraph. It says, due to its unique formal responsibilities and familiarity with the Alaska coastline, we believe the Coast Guard is uniquely suited to coordinate the response to this disaster. While we are proud of the accomplishments to date, these efforts pale before the task. I look forward to your support in meeting this awesome challenge.

[The letter follows:]

STATE OF ALASKA,
OFFICE OF THE GOVERNOR,
Juneau, April 5, 1989.

Rear Adm. EDWARD NELSON, Jr.,
Commander, 17th Coast Guard District, Juneau, AK.

DEAR ED: Today the State of Alaska is initiating a request that the Coast Guard immediately take over coordination of the *Exxon Valdez* oil spill under 40 CFR Part 300. As you know, the State of Alaska, the Coast Guard and Exxon representatives have worked together with fishermen and other concerned citizens to contain and mitigate the damages from this spill.

Exxon, as the entity legally responsible for the spill, currently has primary responsibility for directing this operation. Despite all of our best efforts, less than four percent of the 240,000 spilled barrels have been recovered. Several hundred miles of Alaska shoreline has been inundated with oil. The expanding slick has escaped Prince William Sound and it is now moving through the Gulf of Alaska, threatening other Alaska communities. Under these circumstances, the State of Alaska, many of the federal agencies and the participating citizens groups believe that a change in approach to management of this disaster is necessary.

Due to its unique formal responsibilities and familiarity with the Alaska coastline, we believe the Coast Guard is uniquely suited to coordinate the response to this disaster. While we are proud of the accomplishments to date, these efforts pale before the task. I look forward to your continued support in meeting this awesome challenge.

Sincerely,

STEVE COWPER,
Governor.

Senator STEVENS. The governor has now asked that the Coast Guard take over the control of this disaster. It is now approaching Kodiak, the largest fishing port in the world, and harvests some $160 million worth of fish.

Current law distinguishes between "natural" and man-made disasters—this distinction makes sense only from the point of view of fiscal accountability.

Otters die, shrimps are contaminated, and salmon eggs can't hatch when covered with oil—it makes no difference whether it was an act of God or a drunken driver.

Mr. Chairman, I think that the act we passed last year gave the President the authority to declare an emergency, a Federal disaster. The Clean Water Act authorized the President to appoint a coordinator and to act to remove, or arrange for the removal of the oil unless he determined the removal would be done properly by the owner or operator of the vessel.

Up to now, that has not been done and I hope you will all join me after this hearing in urging the President to take the action re-

quested by the Governor of Alaska and to take the action requested by the Alaska delegation yesterday to declare an emergency in Alaska as a result of this national disaster.

Thank you very much.

The CHAIRMAN. Thank you, Senator Stevens. We will also note the presence, for the record of the junior senator from Alaska, Senator Murkowski. As you well know, I favor junior senators, having been one for 22 years.

Senator Packwood, do you have a statement?

OPENING STATEMENT BY SENATOR PACKWOOD

Senator PACKWOOD. Mr. Chairman, this hearing today is very important and I commend the speed with which you have pulled these witnesses together. We have all been closely following stories about the *Valdez* oil spill in the press, but it is critical that members of this committee get a first-hand account of the circumstances surrounding the spill from key officials of the administration and from Exxon itself.

The spill of more than 10 million gallons of oil in Alaska's Prince William Sound raises a multitude of questions about the transport of oil from the Alaska pipeline and out ability to respond to accidents of this magnitude. The devastation caused by the spill is just beginning to be felt by the State of Alaska, by fishermen up and down the west coast, and by others who depend on the area for their economic well-being, lifestyle, and sustenance. We have already seen a tragic loss of animal life. Worse yet, the full impact of the spill on animal life, the food chain and the environment in this sensitive ecosystem will not be realized for many years to come.

A whole host of errors led to the grounding of the *Valdez* on Bligh Reef. It is my understanding that reports by a team of high-level administration officials and by the national transportation safety board on the causes of the accident are still being compiled. We may have to wait for the completion of these reports before we can put together all the pieces of the puzzle. However, I look forward to pursuing answers to the initial questions already raised by the spill at today's hearing.

Mr. Chairman, it has been reported that the *Valdez* may be taken to Portland for extensive repairs after some initial minor repairs have been done. However, there are several concerns that must be met before such a move can take place. We cannot allow the *Valdez* to make the trip out of Prince William Sound and to Portland, or to any other port without ensuring that the vessel is seaworthy and that it will not trail oil en route. We also need to ensure that contingency plans are in place should problems arise at sea. I will be working with the State of Oregon, with Exxon and with the Coast Guard on these matters. I certainly support additional jobs for Oregonians, but not at the expense of the environment.

The *Valdez* disaster raises further questions about how best to balance the need for resource development with that of protecting our unique coastal environments. I look forward to hearing the testimony of today's witnesses, and to the committee's continued efforts to properly balance these two important goals.

Thank you, Mr. Chairman.
The CHAIRMAN. Senator Gorton.

OPENING STATEMENT BY SENATOR GORTON

Senator GORTON. I am pleased that the Commerce Committee has scheduled today's hearing on the Valdez oil spill. I thank Senator Hollings for recognizing the need for Congressional oversight in this matter. The disturbing course of events relating to critical and time sensitive decision making, necessitates Congress' careful scrutiny.

Actions of the Exxon Shipping Company that resulted in the oil tanker spilling more than ten million gallons of oil into Prince William Sound, Alaska border on criminal negligence.

I am appalled that an industry such as the oil industry, after having received immense monetary benefits from oil resources, would be so reckless in its preparation for imminent disaster. The industry during the past two weeks has, for this Senator, polluted its own clout even more than it has defiled fragile ocean ecosystems. I would encourage Exxon to work on cleaning up the latter effectively and expeditiously if it ever hopes to repair its own reputation.

I look forward to learning more on what actually has taken place since the disaster of March 24. I have grave concerns, about the entire situation and specifically on the following: the contingency plan agreed to by State and Federal officials for containing oil-tanker spills, the desperate need for accurate wildlife inventories to track the effects of this tragedy and the urgency in assessing the current state of our oil tankers on the Valdez oil route.

The contingency plan drawn by Alyeska Pipeline Company was obviously flawed. I expect that this committee will be interested in the details of any Federal involvement affecting this plan. Key components of any plan I expect obviously take into account time of day and weather factors. I am curious to what degree this plan assessed spills occurring during the dark of the night, and how the state of the sea was considered in assessing the use of dispersants. I am tired of reading excuses for delayed action due to the unknown state of the spill because of the dark night, and the delay in the use of dispersants because the state of the sea was not "just right". I cannot for the life of me believe that in an area such as Alaska, where large portions of the days are dark, and where the state of the sea changes radically that these factors were not well planned for.

I am deeply concerned for not only the immediate effects on our sensitive fisheries and marine life, but also for effects on our wildlife. We have bald eagles, golden eagles, and other wildlife feeding on contaminated carcasses. We have an immediate impact on the herring industry, whose season has now been cancelled, and a serious threat to the salmon industry. It is not only the fishermen who will be impacted, but the processors will also suffer. In order to fully understand the effects of our recent disaster I find it imperative that immediate inventories on marine life and wildlife begin. Food chains are now contaminated and I fear that we will be seeing the results of industry's carelessness for years. After Wash-

ington State's own oil spill affecting the Olympic National Park, I would hope that the Department of Interior is not wasting a moment of time in preparing for potential impacts of the Valdez spill on some of our nations most ecologically valued public lands. I am now more satisfied than ever that I worked to make permanent the supertanker ban in Puget Sound.

I cannot stress the critical need for this committee to seriously examine the state of aging oil tankers. Every day that we delay such an assessment takes us one day closer to another disaster. We are allowing time bombs to travel in sensitive ocean areas. These tankers are carrying scarce and precious resources that cannot afford to be handled in such a careless fashion. I understand that the fleet of ships now being loaded in the Port of Valdez has an average age of 17.5 years in an industry where most ships are retired at age 20. With the economic state of our U.S. shipyards being one where it readily awaits work, I cannot imagine why there are not outstanding tanker orders in U.S. shipyards. If this is truly the case, then I believe this course of management to be unconscionable.

Again, thank you Senator Hollings for scheduling this hearing. I look forward to hearing answers to the many questions raised by the *Valdez* disaster.

The CHAIRMAN. Senator Inouye has a statement for the record.

[The statement follows:]

OPENING STATEMENT BY SENATOR INOUYE

I wish to congratulate my distinguished Chairman for quickly scheduling this hearing on the environmental and maritime questions raised by the Exxon Valdez oil spill. To exercise its legislative and oversight responsibility, at the very least the Committee needs to know what happened, how it could have been prevented, and the responsibility and plans for cleaning up the ugly consequences of this disaster.

My own state of Hawaii is no stranger to oil spills, although the size of the spills and the amount of damage they have caused cannot compare with what occurred off the southern coast of Alaska when the *Exxon Valdez* ran hard aground, punching three holes in its hull, and spilling over 10 million gallons of black viscous crude oil into Prince William Sound.

Nevertheless within the past few months the 800-foot tanker Exxon Houston ran aground about 15 miles from Hawaii's most popular beach, spilling an estimated 25,200 gallons of fuel oil and crude.

Most recently, substantial quantities of crude oil from unknown sources—estimated to exceed 10,000 gallons has washed up along the north shore of Lanai. The area known as Shipwreck Beach and five miles in each direction along that beach are the most heavily impacted from the oil spill. The State's Health Department's Population Investigation and Enforcement Branch has posted "Polluted Water" signs along Shipwreck Beach and in other areas where oil has washed up on Lanai.

While the concern of this hearing is understandably the *Exxon Valdez* accident and its consequences, I expect the responsible federal agencies to be no less diligent in investigating and reporting the causes and effects of what has occurred in my own State of Hawaii.

The CHAIRMAN. Secretary Skinner, we welcome you and your associates. We will be glad to hear from you at this time.

STATEMENT OF HON. SAMUEL SKINNER, SECRETARY, DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY CAPTAIN LARRABEE, U.S. COAST GUARD

Secretary SKINNER. I thank you, Mr. Chairman. First of all, I am accompanied today by Mr. Larrabee. Captain Larrabee is in charge of the effort here in Washington and has been working with the

Commandant and I on this problem from the very beginning. The Commandant is expected here later today. He is testifying before another Committee.

As the Committee may know, at President Bush's request, EPA Administrator Reilly, Admiral Yost and I went to Prince William Sound to oversee the Federal effort and to assure that Exxon, as the vessel owner, was doing everything possible to minimize environmental damage. He wanted us to make sure that there was a concentrated effort on dealing with this, as Senator Steven's properly describes, the largest oil spill in American history.

There is no question that this is a disaster of major import. I do not think you can reflect properly the impact of this unless you have been to Alaska, as Senator Stevens and Senator Murkowski and I have been, to see the area; to see the way that the area flows and to see the crude all over that area. It is 10 million gallons of crude, most of which went into the water within the first five hours of the disaster.

I want to make three points on this. First of all, the National Transportation Safety Board is investigating the accident, and they will properly report after their investigation is complete. They are cooperating with the Coast Guard and the Alaskan Attorney General's Office, who are also conducting investigations.

It is too early to have a complete factual analysis of this situation, but I think it is fair to say that Exxon has the primary responsibility for this accident. They have acknowledged it and they have been also primarily responsible for supporting the clean-up effort. We still have millions of gallons of oil in the water and, as I said earlier, all of our time and energy at this point should be spent on what we can do to minimize the damage that occurs.

Second, while I am confident human error will be dealt with appropriately we would miss the larger point if we were to leave it at that. My mind is not closed on this, but my impression is that a somewhat over-optimistic attitude crept into our readiness and ability to deal with a spill of this magnitude, or even that an accident of this size would occur.

The industry-government contingency planning was based on an assumed spill level that was quickly exceeded. The industry did not have enough equipment on hand. This was compounded by the remote location of the spill. But it goes without saying that every step of the planning for moving Alaskan oil by water had to assume a spill in just this locale.

Admiral Yost and I have overseen the Coast Guard response and I am satisfied with it, particularly the ability of the Coast Guard personnel to shift from patrol and other duties to supervising clean-up efforts.

However, I think any situation such as this calls on us to assess our contingency plans, as well as those of the industry and the states, and ensure that they are updated accordingly. That process is already underway and the President has asked for a report on that issue within the next two or three weeks. In order to minimize the factor of human error, there must be an adequate prevention plan.

Third, my instinct in a situation of this nature is not to throw up our hands and concede that we cannot do a better job with the

ocean transportation of petroleum and that the only advisable course is to minimize reliance on ocean shipments. Our demand for sources of independent energy is too important for that.

It is indeed appropriate that the jurisdiction of this Committee crosses the full spectrum of this question—from the important environmental concerns overseen by the National Oceanic and Atmospheric Administration to the Coast Guard, and the many questions of interstate and foreign commerce.

There are several things that can be done in the area of legislation. This Committee originated legislation that authorized access to the National Driver Registry by the FAA for airmen and to railroads for hiring locomotive engineers. That legislation is now on the books, thanks to the work of this Committee and the work of the FAA and the Department of Transportation.

We are considering whether it can be usefully extended to the Coast Guard certification process for licensed seamen. As you know, the master of the *Exxon Valdez* had a record of DWI convictions and he did not acknowledge them in seeking renewal of his license with the Coast Guard.

More importantly, it is also time to reassess the need for comprehensive oil spill liability and compensation legislation. Legislation has passed the House twice, but it has floundered in the Senate. This Administration would be pleased to work with the Environment and Public Works Committee and other interested parties to restart the process.

I know Senator Breaux, as a member of that Committee, has been a strong advocate of responsible legislation. The previous Administration worked with the House in passing bills dealing with liability for oil spills, in the 99th Congress. H.R. 1465, recently introduced in the House, represents renewed efforts in this area.

The Bush Administration has committed its resources to working with the Congress on responsible legislation. It is important to recognize that the Valdez spill illustrates dramatically the vulnerability of our coasts and rivers to the continuing threat of oil pollution.

In the case of the spiller, Exxon, it has stated that it takes responsibility for clean-up and damages and they have the financial resources to do the job, but if the spill were from a foreign flag carrier, not carrying Alaskan oil, and whose owner had few other resources, there would be no means under current law to assure that damages are met. Clearly, an alternative is needed.

Moreover, a significant proportion of the crude oil arriving in the United States is not effectively covered by the four existing U.S. statutes—Section 311 of the Clean Water Act and specific provisions on oil pollution liability in the Outer Continental Shelf, Deepwater Ports and Trans-Alaska Pipelines Acts.

The Senate could also address the problem by ratifying the 1984 protocols adopted at the International Maritime Organization Diplomatic Conference convened in 1984 to update 1969 and 1971 conventions dealing with sea-going tanker oil pollution. Senate advice and consent to ratification of the protocols would demonstrate our commitment to higher, uniform international standards, and would greatly improve coverage for United States citizens, speed and certainty of recovery, and consistency of requirements for shippers.

Jurisdiction is established in the courts of the country where damage occurs, and recovery is backed by compulsory insurance.

Because the protocols establish an exclusive shipowner liability regime, this would mean the phase-out of duplicative State liability regimes. However, States will be able to maintain funds which finance the purchase or prepositioning of cleanup and removal equipment and which otherwise provide protection for their citizens from oil pollution incidents.

I would also indicate that, as I indicated in my testimony before the Environment and Public Works Committee on January 26, prior to my confirmation, a patchwork of domestic statutes and international agreement forms the legal basis for the Coast Guard's marine environmental protection program.

I am part of an Administration that has pledged greater attention to environmental protection, so I assure you that I will work with the Committee to review the need for strong measures to strengthen and consolidate oil spill liability and compensation to provide better protection for our environment and a faster system for compensating the victims of oil pollution.

I am available for questions. I, along with Captain Larrabee, have a significant amount of detailed information covering the exact effort of the Coast Guard and other organizations of the Government in that area.

It is a problem that we are dealing with 24 hours a day, seven days a week. It is a major problem. It is not a problem that is solved easily. It is going to require the combined efforts of all of us, and we are constantly reevaluating the progress of that effort to see what additional steps can be taken.

In the meantime, the assessment of the contingency plans is already underway so that we can learn from this experience. As we have been in the past, the Department of Transportation is available to work with the House and the Senate on legislation that will protect the environment in the future if—heaven forbid—we have a spill of this magnitude or anywhere close to this, and if the spiller does not have the wherewithal of Exxon, so that the environment and the victims of this type of catastrophe are protected.

The CHAIRMAN. Well, let me say on behalf of the Committee, Senator Kerry, we announced that your National Ocean Policy Study would be conducting further hearings as to the assessment and Senator Breaux, your Merchant Marine Subcommittee will also be conducting its own hearings in depth. Mr. Secretary, I'm more concerned, not that the crowd has got the money, but has it got the capacity and the readiness?

Now, we passed the Alaska Pipeline Act and in there, we fashioned, not only the liability regime but also the equipment and the readiness. As a response to that particular requirement, the oil companies with all the money that you describe said they were ready. I am not worried about them having enough money. I am a good enough trial lawyer to want to quit this job and run up to Alaska and beat Melvin Belli and get the case myself.

I know they have got enough money and I know I can collect over the $100 million, but the Congress foresaw this kind of problem and rather than responding to the readiness and the capacity, I understand that the oil companies were only able, at best, to have

the capacity to really handle about a spill of 3 million rather than 11 million gallons and their barge, were laid up at the time of the spill.

In other words, this occurred in the very early morning of, let us say Friday at 12:04. It was 11:00 on Saturday before they really got out and got the booms out and everything else of that nature. Then there was a question, further, of whether or not to use the chemicals. Let me not get into the chemicals right now.

Is it not a fact that Alyeska, namely the plan that they in calls, for immediacy? I do not have to go through the courts and find, as you indicate is the case, that they would not have enough money, but we ought to be thankful that Exxon has got plenty of money—that is not my problem.

My problem is the readiness and the capacity to be able to clean this up, to avoid it or stop it at 1 million rather than 11 million spilled, that particular night or early morning.

Secretary SKINNER. Let me see if I can address that. I understand your concern and you are correct. There was a contingency plan approved by the state, by the consortium that runs the effort at Valdez, that called for a five-hour response and it called for dealing with a spill, maybe in the magnitude of 25 to 35 percent of the magnitude of this spill.

This tanker held over 50 million gallons. Over 10 million gallons went into the water. Most of that went into the water within the first five hours. The contingency plan calls for a response within five hours and the primary response would have been to be on the scene and stop the spill, through the use of booming, and to contain the 10 million gallons of crude around the vessel. Now, I do not think the contingency plan dealt with a spill of that magnitude.

Number two, they did not respond quickly enough. I was up there within, I believe, 48 hours of the grounding and what I saw was that it was Monday night before the effort really came together. However, I do not want to leave the impression that, if in fact they had responded within five hours, they would have been able to contain a spill of this magnitude, because there just is not enough equipment to contain and pick up the amount of crude that went out in the first five hours. A skimmer, the device that picks up the crude, at best picks up crude at about 500 gallons per hour.

The CHAIRMAN. Well, you are back to our concern. I am still of the impression that the current law is adequate, but as you say in here, there was an insufficiency, or inadequacy of equipment.

Now, if they have got new ships—and this was the most modern of tankers and they are coming and going every day up there—is it reasonable and practical to pile up that much boom equipment and prepare itself to handle one of these kinds of so accidents—in other words, it just hit a rock. It just did not blow up and all of a sudden sink and everything go into the water at once

So 11 million gallons they ought to have been able to take care of, it seems to me. You say that is unreasonable and unpractical? So if I introduced a bill to say that they must have enough equipment on hand, it would be a sort of silly bill? Is that right?

Secretary SKINNER. Well, I am not optimistic that we can put enough equipment in Valdez to contain this kind of spill within

five hours. It means that the water would have to be in perfect conditions.

You are not going to sweep up this size spill at 500 gallons per hour. So you have got to contain it with high containment booms, which you can surround the ship with and contain 10 million gallons of oil.

If the weather is perfect, you have got that amount of boom out there, and you can contain it over an extended period of time—where you could pick it up at 500 gallons per hour, per vessel which I figured out was a significant number of vessels—then you could do it.

But if the weather breaks, which it did, on the adverse side, or the currents start flowing, the booms break. The technology available breaks, and what happens is it floats down, all the way down, right out through Prince William Sound.

So, I think, if you introduced a bill that required enough equipment on site to deal with a 10-million gallon spill, you would be very surprised as to what kind of effort it would take. I am not excusing the situation, but I would also question keeping that amount of equipment there and ready for a catastrophe of this magnitude, since—it has been the first in 15 years.

We have had 8,700 ship transits through the Sound since the pipeline opened. We have had 6.6 billion barrels transported, so to keep that readiness level like a fire department getting ready for the biggest fire in its history and not having any fires at all to work with for 15 years. Keeping the amount of people and equipment on board to deal with it is extremely difficult and may be unrealistic.

The CHAIRMAN. But bottom line, if they had had a sufficiency of equipment and readiness there they would have avoided the 11 million gallon spill. It could have been contained at, say, 5 million, or contained or dispersed or otherwise handled.

I can see that we are going to have to adhere strictly to this clock to get around all the members. Senator Danforth?

Senator DANFORTH. Mr. Chairman, I ask that Senator Stevens be recognized at this time and he be allowed to combine my time with his.

The CHAIRMAN. Very good.

Senator Stevens.

Senator STEVENS. Well, I thank you, Senator Danforth. And I will not take all of that time, because I think other Senators should be involved in this, too.

Mr. Secretary, I thank you for going up. I got there two days after you did. But I thank you for going up when you were there.

Were you informed that this spill was uncontrollable at that time?

Secretary SKINNER. I think when we got there we had a pretty good idea and, generally, that is what we reported, I think if you look at my reports, when I was asked about it, I said it is a very difficult problem to contain at this time.

By Tuesday morning, Senator, it became quite clear to us that the proverbial genie was out of the bottle, and the amount we were containing was about half way down the chart. We visited all of

the islands; we saw it up on the shores. We felt that we really had to protect certain areas; that some of it would flow out.

We were off-loading the tanker. The important thing to remember is, if 11 million gallons went into the water, there is still another 40 million gallons in that tanker which is in a somewhat tenuous state on a reef. And it was imperative that we off-load four times as much fuel and petroleum as was in the water.

So, I was satisfied that the effort was the best that could be put together and that effort was going well. Pumps were being brought in from all over the country.

I thought that the effort to contain the area around the fish hatcheries and the putting up of boom was fair and improving.

Senator STEVENS. Mr. Secretary, I do not want to take too much time, as I said. Were you given any advice from oceanographers about where the spill was going to go?

Secretary SKINNER. Yes, we had detailed information. We met with the task force—the response task force; they indicated that they could not predict with absolute certainty, but they gave us an indication that it would flow down, and it might tend to go in a northwesterly direction.

Senator STEVENS. Let me tell you, I got in there Friday morning, and I advised the response team of the capabilities of Dr. Tom Royer at the University of Alaska, who spent 20 years studying this area. I gave them the chart that he had drawn, showing where the oil would go. It has gone precisely where he said it would go. They did not even call him. To my knowledge, they have not called him yet.

I want to know three things, if I may, and then I will yield to my friends. Can you provide this committee with a copy of each one of the plans that were prepared for response to a spill in Prince William Sound? I understand your department has them.

Secretary SKINNER. Yes, we can do that.[1]

Senator STEVENS. Second, can you tell us where there was any change in—now, can you tell us now—any change in the types of boom that would be required? You saw eight-inch booms, Sam, 36-inch booms are the norm today; those booms that you saw going around the boat split the day you left.

Secretary SKINNER. Well, some of them were split when we viewed them.

Senator STEVENS. Do you know why? They were from Prudhoe Bay, they were land booms. Were you told about the problems that they were encountering at the time?

I am not faulting you. Again, I thank you very much for going up. You showed a concern, an awareness, but I do not think you got the right information when you were there.

Secretary SKINNER. Well, let me ask Captain Larrabee to address the boom issue. When I was there and we assessed the effort—as you know, Senator, your staff was also there, Governor Cowper, who had earlier made a request that this effort be federalized, had withdrawn that request. I met with him the day I landed and he said, given the circumstance, the situation and Exxon's commit-

[1] The material was retained in the Committee files.

ment, and given the situation that we find ourselves in, the way we are proceeding is the way you should proceed.

It does not mean that we had the right equipment, because, you are right, the right amount of equipment and boom was not in place. Captain Larrabee, maybe you can address that.

Captain LARRABEE. Senator, the booms that were being used, I believe were a little bit larger than eight-inch booms, although I think some of their booms that they did get out there, were probably of that size.

I believe, though, that the booms that they used initially were a little bit larger than that. And, of course, the booming that has been brought in place since then is much more extensive.

Senator STEVENS. Well, I talked to the man in Cordova who had the contract to put the boom around the tanker, and he told me he quit because he would not put out that kind of equipment; it was inadequate and should not have been used.

Do you know anything about Sea Fences?

Captain LARRABEE. I believe that is a trade name, Senator.

Senator STEVENS. The Navy salvage group uses them. Have you ever used them?

Captain LARRABEE. Yes, sir. It is a 42-inch boom, and that is the boom that is being used to protect the hatcheries.

Senator STEVENS. Well, I am informed it can be used to stop the drifting of oil as well as contain oil from areas such as the hatchery areas.

Captain LARRABEE. Yes, sir. One of the techniques that would be used, particularly in a large spill such as this, would be to actually put the boom out between two vessels and drift with it as the slick moves.

Senator STEVENS. That was not done here, though, was it?

Captain LARRABEE. I was not there the first day, sir. I am not sure.

Senator STEVENS. To today, it has not been done, has it?

Captain LARRABEE. It is being used in several areas. The Coast Guard boom, for instance, is used in that fashion.

Senator STEVENS. To stop the drift?

Captain LARRABEE. Yes, sir. We actually move through the oil and collect it and recover it in that manner. And also the Navy skimming systems that are now presently in operation are doing the same sort of thing.

Senator STEVENS. Well, if the Secretary's statistics are right, it would take 1,000 days to pick up this oil.

Captain LARRABEE. I have not worked out the numbers, but, yes, sir, this phase of it—the clean-up phase of this effort—is going to be expensive and is going to take us a long time.

Senator STEVENS. My point is, we knew we could not contain it in the Sound. If we could not contain it in the Sound, it is now out in international waters; it is no longer the responsibility of the State, ought not to be just the responsibility of Exxon; it ought to be our responsibility as a federal government.

Now, Mr. Secretary, are you going to support the request of the Governor, that we have Coast Guard coordination now of this spill as it leaves the Prince William Sound and goes to Kodiak and up to Umiak Pass?

Secretary SKINNER. Well, let me say, Senator, that that request came in last night. First of all, the Coast Guard is coordinating this effort.

Senator STEVENS. Exxon was coordinating it when I was there, and clearly was in control.

Secretary SKINNER. I just want to give you a feel, Senator, if I might, for the amount of resource that is in the area right now.

The Coast Guard has four cutters, six small boats, two fixed-wing helicopters, four helios, six Adaps, which are major pumps, another major pumping system, two pump floats, one open water oil containment system, 11,000 feet of rigid boom, 100,000 feet of absorbent boom, a comm center, 40,000 pounds of miscellaneous equipment and a containment bladder.

Exxon has contracted for 100 vessels, 12 landing craft, three tank barges, one deck barge, one barge for living, 49 helicopters, 12 skimmers, 12 dirk cones, which are bladders, 45,000 feet of rigid boom, 66,000 feet of absorbent boom, two emergency medical services, two boat cleaning stations.

The Navy has seven skimmers in place, with 15 in route. The Coast Guard has another six cutters, six skimmers, two helios and one fixed-wing in route. We have various Department of Defense aircraft, along with various federal and state equipment.

So, Exxon has over 500 people stationed there, we have over 400, and there are over 100 additional state employees.

Senator STEVENS. The team that Congress provided, the Incident Response Team, that went up there at the request of the State, was left sitting in a warehouse for two days. I found them in Seward; they had been completely rejected by everybody you talked about. They are the only people that really knew how to manage a disaster. And they were not utilized at all.

Now, Mr. Secretary, with all of that stuff there, and I saw it too, it is like an armada, the problem was the coordination of that effort. No one seemed to realize it was going to go on to Kodiak and on to Umiak. I am told that it will be with us for at least two more months.

Now we ought to have an emergency group. We have asked the President to declare an emergency under the SBA Act; we have asked now for the Coast Guard to coordinate this effort as it leaves Prince William Sound. Without question it should be a federal responsibility now.

And, Mr. Secretary, if we do not get that, I am going to ask the Chairman and the ranking member to join me in an emergency bill to demand it. We have got to have federal control now.

Mr. Chairman, I thank you very much.

The CHAIRMAN. Please respond, Mr. Secretary. And then I am going to thank you for your courtesy in yielding to our administrator of EPA.

Secretary SKINNER. First of all, let me say that the President has met virtually daily on this situation. He met with us both before and after we travelled to Prince William Sound. He met with Senator Stevens, Senator Murkowski and the Congressmen yesterday in the White House for an hour. I talked to the White House last night. We put together a contingency plan to escalate the effort,

even significantly beyond what is already present here. That is under review right now.

When we are done, I plan to be meeting with the White House along with Administrator Reilly and Admiral Yost.

So we are daily assessing this situation. It is an extremely complex problem, at this stage that, as Senator Stevens properly indicates, is going to take months to remedy to any degree of certainty. We knew that going in, and when I say going in, we knew that on Tuesday when we were in Alaska. It continues to be true today.

Let us realistically look at the problem and then put in whatever resources are necessary. If we have to increase resources, I am sure the Administration will do so, but, as I point out, there are already many resources available.

Also I think, given the nature of the problem, there is a level of coordination such that, at least until last night, Governor Cowper was satisfied with the program. He initially asked for federalization, and then he said, no, do not federalize, keep it the way it is going because this is the best way to coordinate. Monday evening it came into place. That was a week ago Monday.

But, Administrator Reilly may have something to add.

The CHAIRMAN. Mr. Secretary, we appreciate your yielding.

Mr. Reilly is due to testify over on the House side at 10:00 and we will not have time for many questions, but we are indebted to Mr. Reilly for his willingness to come and at least try to give his particular statement so that we can have as comprehensive a hearing as possible.

Admiral Yost of the Coast Guard is over testifying at the present time before the House, and will be momentarily along, around 10:30.

So, Mr. Reilly, thank you very much for coming this morning.

STATEMENT OF HON. WILLIAM K. REILLY, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY

Mr. REILLY. Thank you, Mr. Chairman, and members of the committee. I apologize for arriving late and for not having had the benefit of Secretary Skinner's remarks. I was involved with various problems relating to this spill just this morning, and will return to it, as will he, in a matter of another hour or so.

I probably will repeat much of what Secretary Skinner may already have covered.

This is obviously an environmental catastrophe of the first magnitude. It is a national tragedy for environmental resources of a very unusual quality and significance. The size of the spill is, of course, as has been recognized, the largest in United States history.

It has occurred in one of the most productive and valuable ecological environments, and one of the most fertile fishing grounds, of any in the world. It unfortunately is likely to have significant effects for some time to come.

We are not able at this time to say how long, how lasting, how destructive the impact of this spill will be on the very important resources there, in many ways very fragile resources.

Evidence from previous oil spills is conflicting. Very large spills have on occasion had surprisingly short lived impacts on the envi-

ronment. That is particularly true of the Torrey Canyon spill off the coast of England. Small spills, relative to this one—Santa Barbara, 770,000 gallons—have had very significant effects that have been measurable as late as ten years after the event in bottom sediments and in impacts on the reproductive life of fish.

It is simply too soon to say exactly what the effect of this is. It is clear, however, that it is the San Francisco Earthquake of ecological catastrophes.

We have on scene, as Secretary Skinner described, a very considerable Federal presence and response. The National Response Team, which is chaired by the Environmental Protection Agency with a vice chair from the Coast Guard, is meeting daily on this effort, monitoring every aspect of the response, of the clean up, as is the Regional Response Team chaired by the Coast Guard based in Alaska.

The first priorities, obviously for this problem, were to deal with the very significant amount of oil on the crippled tanker itself, and to do everything to make sure that the lightering of that oil proceeded as fast, as efficiently as possible, with the least risk to the environment. That, we are very pleased to say, has been accomplished.

The second priority was to try to ensure that the most productive and threatened fisheries, the salmon hatcheries in the Sound were themselves protected, were boomed. In fact, they have been double-boomed. And my understanding is that most, if not all of them, are in reasonably safe, secure condition at this time, barring a significant shift in currents.

The movement of the spill, which I gather stretches now over 1,000 square miles, as it moves out into the Gulf of Alaska and along the coast, is being very closely monitored. Communities that have requested protection and booms are being responded to there.

When the President first learned of this he dispatched Secretary Skinner and Commandant Yost of the Coast Guard and myself to the scene. We met with Federal, state and local officials, we met with industry people, with fishermen, with other affected interests, and had three overflights of the Sound. We reported back to him.

And he directed that we oversee the preparation by the National Response Team of a report to the President that he wanted within 30 days.

That report is to provide a full description of the incident; it is to address the status of preparedness for this incident; it is to assess the response actions taken up to that time; it is to provide a description of preliminary effects, and the effects that we will be able to describe in 30 days will be necessarily tentative and preliminary with respect to the ecology and the long-term recovery prospects of the Sound.

We are to identify the follow-up actions needed, including supplemental reports, discuss the lessons learned, and address whatever economic and energy impacts we can, as may be appropriate and reasonable at that time.

I think that one of the most important exercises under way from the point of view of environmental protection and recovery is proceeding under the direction of the National Oceanic and Atmospheric Administration. It has the responsibility of beginning, of

conducting, of overseeing the long-term analysis of ecological effects, of the recovery effort, of assessing impacts, and whatever we can do to respond to them.

That will take some time to develop. One function that we have in the oversight of the National Response Team is to assess that effort and to ask whether or not the right questions are being posed, and whether or not the appropriate mix of authorities, experts, agencies, and people are involved.

There are 14 agencies of the Federal Government involved in virtually every aspect of overseeing the response to the spill and the recovery from it. There is the National Response Team, the Regional Response Team, the Coast Guard National Strike, the Coast Guard Public Information Assistance Team working with the people up there as well communicating down here, EPA's Environmental Response Team which is on-site there, NOAA's Scientific Support Coordinators, and finally, the National Response Center.

EPA's role in this is not the lead role, but through our Region 10 we are providing direct logistical and technical support. We have three full-time personnel on the scene there, and an additional four at this time who may spend intermittent periods in Alaska.

We are concerned with response oversight and with some assistance on environmental impacts and shoreline protection. Our Emergency Response Team has been activated, that is our own EPA Emergency Response Team, and is on-site there working with the on-site coordinator and the Alaska State Department of Conservation.

The ERT, the Emergency Response Team has conducted several overflights of the area and has made site visits to the areas affected by the spill. We are providing advice on shoreline cleanup, and on the impact that we can estimate on the marine environment of the movement of the oil.

Finally, the National Incidents Coordination Team within the Agency has been activated as the internal agency coordinating mechanism to address our assistance efforts.

Having said that, I think that we have to acknowledge that the adequacy of contingency planning for this and other spills deserves review and attention. And we are prepared to participate in providing that.

I think that Secretary Skinner and I both had the impression, as we looked at the resources available to manage a spill of this sort, that the Nation may need to reconsider the decisions it has made, the sense of complacency, perhaps, that has characterized our attitude toward oil spills.

It strikes me that, from an environmental point of view, over the last several years we have become very absorbed, very focused on toxic spills, hazardous waste, some of the more exotic problems of medical waste on beaches, and things of that sort, all very serious, difficult problems urgently in need of attention.

But, at the same time, we have perhaps become less attentive to the need for maintaining our readiness to address the more conventional and more familiar problems, partly because they declined. Oil spills over the years have diminished, both around the world and in the United States.

We need to look at the adequacy of our response capability and, I think probably also, at some of the technology that is available to deal with problems of this sort. Because one certainly has to acknowledge that in this situation it was far from enough.

That concludes my testimony, Mr. Chairman. I thank you for the opportunity.

The CHAIRMAN. Well, we want to keep our commitment to get you back over to the House side. Just one question, then maybe if you have got time for a couple more.

Who coordinates? You keep using the word, and I can understand the frustration in Senator Stevens' question. Is Secretary Skinner the senior member? Is he the coordinator?

Mr. REILLY. The Coast Guard provides the on-site coordination, the on-scene coordinator who is exercising, from the Federal point of view, all of the coordinative supervisory authority for the government.

The CHAIRMAN. So Admiral Yost is in charge of all of that?

Mr. REILLY. Yes, sir. That is correct.

The CHAIRMAN. Is there an emergency question, one or two here?

Senator STEVENS. Well, if I could follow up on just that one thing, about the final decision as to what is done it is being made by Exxon, is it not?

Mr. REILLY. The final decisions about the cleanup are being coordinated very closely with the Regional Response Team and with the on-site coordinator. And I am not aware myself of anything that the Federal Government has asked to be done that Exxon has declined to do.

Senator STEVENS. Well, Exxon declined to bring the boom up to Seward. We had to arrange to get it up there through the Coast Guard. I mean my impression, Bill, was that the final decision was made by Exxon as to what would be done.

Let me say, Mr. Chairman, that I am delighted that Mr. Reilly is here and Mr. Skinner. I think Bill Reilly has probably the best international qualifications of any man we have in the country. And I am delighted that you were there.

I still have some questions, and we do not have the time. For instance, this 1.2-plus million barrel supertanker replaced ten regular-sized tankers. At the time the pipeline was authorized by Congress, we had about 120,000-barrel tankers, maybe 140,000, somewhere around there; now we have got in excess of 1.2 million gallon supertankers.

Were we wrong? Were we wrong to eliminate the smaller ones and to have the large ones, so that when we have a spill it is a monster as compared to having a series of smaller ones, potentially? Have you looked at that?

Mr. REILLY. No, sir, I have not. We are going to have to clearly look at all aspects of the decisions that have been made that may have played some part in this.

When the original environmental impact statements were done, they did not contemplate any number of things that since have come to pass. And we are committed to doing that.

Senator STEVENS. I promised you yesterday I would give you the outline of the items that the Institute of Marine Science and the University of Alaska feels are absolutely minimum for this long-

range research necessary to get the baseline data. I will send it down to you.

Thank you very much.

[The outline follows:]

ENVIRONMENTAL RECOVERY FROM THE *EXXON VALDEZ* OIL SPILL

The Institute of Marine Science, University of Alaska Fairbanks, proposes an integrated scientific effort to quantify and understand the environmental consequences of the *Exxon Valdez* oil spill on Prince William Sound and adjacent areas of the Gulf of Alaska. This effort consists of a group of coordinated studies to examine the physical dispersion and chemical degradation of oil, hydrocarbon partitioning into food webs, recovery rate of biological communities, and impact on biological resources of this oil spill. The paragraphs which follow outline the goals, approach and expected benefits of each of the component projects of this study.

1. WATER CIRCULATION

Purpose: to measure the rate and direction that water flows through Prince William Sound
Expected Duration: five years
First Year Cost: $130,000
Principal Investigators: T. Royer, W. Johnson 474 2835

This component will measure the speed and direction of water flow through Hinchinbrook Entrance and Montague Strait, the principal passages through which water moves into and out of Prince William Sound. These currents determine the rate at which water flows through the sound and therefore the rate at which spilled oil in water will be carried out into the Gulf of Alaska. Current measurements will be made using an acoustic doppler current profiler. In addition, measurements of water density (temperature and salinity) will be made in and around the sound to further interpret water movement. This component will provide knowledge about the movement of oily water from the spill. This information will guide the measurements of other components.

2. HYDROCARBON MEASUREMENTS

Purpose: to determine the kinds and amounts of petroleum hydrocarbons in water, organisms and sediments from Prince William Sound
Expected Duration: five years
First Year Cost: $330,000
Principal Investigator: D. Shaw 474 7723

Environmental materials for this work will be collected in coordination with the physical and biological components of this project. Samples of tissues and sediment will be analyzed using methods developed by the National Oceanic and Atmospheric Administration for their Status and Trends Program. This will allow comparison of results with those previously obtained in Prince William Sound and other marine environments. These measurements will document the incorporation and expected subsequent release of hydrocarbons in various components of the marine ecosystem.

3. MICROBIAL HYDROCARBON CONSUMPTION

Purpose: to measure the rates of degradation of hydrocarbons in the water column by bacteria
Expected Duration: one year
First Year Cost: $65,000
Principal Investigator: D. Button 474 7708

To measure the rate of hydrocarbon consumption by microbes, the concentrations of hydrocarbons in water are measured and the degradation rate constants are determined in tracer experiments. This component provides information about the rate at which petroleum is broken down in marine waters of Prince William Sound by natural populations of bacteria.

4. IMPACT ON AND RECOVERY OF THE MARINE ECOSYSTEM

This section consists of four components that will determine the initial destruction and subsequent recovery of the biological communities in the different habitats. These studies must be done in areas affected by the crude oil plume and compared to those unaffected by the spill.

4.1 Impacts on Pelagic Communities. I. Plankton

Purpose: to determine the effects of the crude oil on the processes of the pelagic phytoplankton, zooplankton and ichthyoplankton community

Expected Duration: five years

First Year Cost: $310,000

Principal Investigators: R. T. Cooney, J. J. Goering 474 7407

This component will measure phytoplankton stocks and productivities and zooplankton and ichthyoplankton abundance distribution and grazing. In addition, the timing of natural cycles and those in oil plume affected waters will be followed. Food web relationships will be determined. Samples of these organisms will be collected for hydrocarbon analysis by other components.

4.2 Impact on Pelagic Communities. II. Birds and Mammals

Purpose: to determine the impact on seabird populations and their food web; to provide food web data for other agencies concerned with marine mammals

Expected Duration: five years

First Year Cost: $175,000

Principal Investigator: A. Springer 474 6213

This project will determine food habits and reproductive success of seabird colonies in the affected area and in a control colony unaffected by the crude oil plume. Organisms will be collected for hydrocarbon determinations. Censusing and phenological timing of events on colonies will also be made.

4.3 Impacts on Deep Soft Bottom Communities

Purpose: to examine the bottom animal community under the oil plume waters to assess abundance, distribution and composition of species; to measure the accumulation of hydrocarbon in sediments under the plume

Expected Duration: five years

First Year Cost: $150,000

Principal Investigator: H. Feder, S. Naidu 474 7066

The seabed under the oil plume will be affected to some extent. This component will determine the impact of hydrocarbons on the bottom community and how it affects the biology of important organisms. Sediment traps will be deployed under the plume and in adjacent areas to measure the settling of hydrocarbon particles to the bottom.

4.4 Impacts on Shallow Nearshore Communities

Purpose: to determine the impact on the nearshore, subtidal plant and animal communities

Expected Duration: five years

First Year Cost: $80,000

Principal Investigators: H. Feder, S. Jewett 474 7066

Damaged communities will be assessed and their rates of recovery determined. Zonation and abundance of dominant organisms will be compared to unaffected areas. Emphasis will be on species involved in commercial fish and shellfish food webs.

4.5 Impacts on Intertidal Communities

Purpose: to determine the impact on the biology, recruitment and survivorship of intertidal mussels, barnacles and other organisms important to fisheries food webs

Expected Duration: five years

First Year Cost: $120,000 474 7836
Principal Investigators: H. Feder, K. Highsmith

Biological studies of mussels and barnacles can be related to past work in port Valdez. The abundance, and cycle of life history events will be examined. Organisms, such as harpacticoid copepods which are known to be important in the pink salmon food web, will be studied.

5. IMPACT TO COMMERCIAL MARINE RESOURCES

Purpose: to assess biological impacts on fish and shellfish species of commercial importance
Expected Duration: five years
First Year Cost: $230,000
Principal Investigator: B. Norcross 474 7990

Adult and larval fish and shellfish of commercial importance (Pacific herring, walleye pollock, sandlance, Pacific cod, salmon, flathead sole, Tanner crab, pink and spot shrimp) will be collected with trawls, nets, lines and traps. Abundance of each species, physiological and reproductive status, and the prevalence of lesions, deformities and abnormalities will be recorded and analyzed as functions of time and place of collection and concentrations of hydrocarbons in duplicate samples.

5.2 Impact on Food Quality

Purpose: to survey fish and shellfish species of commercial importance for evidence of tainting
Expected Duration: three years
First Year Cost: $115,000

Fish from the commercially important species listed above will be examined for tainting and will also be assayed for petroleum hydrocarbon uptake by direct chemical analysis and by determination of total levels of cytochrome P-450 monooxygenases. The use of this highly sensitive technique can give the best indication of absence of petroleum exposure.

6. ECOSYSTEM ANALYSIS AND SYNTHESIS

Purpose: to analyze, synthesize and integrate environmental and biological data from an ecosystem perspective and to determine the recovery rates and processes
Expected Duration: five years
First Year Cost: $150,000
Principal Investigator: C. P. McRoy 474 7783

This component is necessary to integrate the results of the other studies to continually develop and revise hypotheses to guide the field sampling program. It will be done in concert with all other investigators.

7. PROGRAM MANAGEMENT AND LOGISTICS

Purpose: to provide field support, to ensure timely completion of component objectives, and to integrate results of individual components
Expected Duration: five years
First Year Cost: $930,000
Principal Investigator: D. Shaw 474 7723

Understanding the rate of recovery of the biological communities of Prince William Sound will require extensive initial field work. Later in the effort, when representative study sites have been identified and change is occurring more gradually, less field work will be required. Field support will be provided by the Research Vessel *Alpha Helix*, a fully equipped scientific research vessel which accommodates twelve scientists and the *Little Dipper*, a small research boat which accommodates three scientists. To gather biological data continuously, a moored biological sensor array will also be used. This will provide information about the timing of biological events and guide more detailed sampling from vessels.

Program management will monitor the progress of each component, encourage communication among components and have overall responsibility for the effort.

The CHAIRMAN. Senator Kerry.

Senator KERRY. Mr. Reilly, I would just like to ask for you to rate as a former—I mean, you are an environmentalist and you have come from a background that is important in this process. And as a former Conservation Foundation head, how do you rate the response, the federal response in this, and what lessons do you draw at this point in time?

Mr. REILLY. Well, there are a number of lessons that we clearly have to learn.

Senator KERRY. Well, how do you rate the response?

Mr. REILLY. The response, I think, focused on the proper priorities. By the time that the spill had been understood, reported, obviously all of that got off to a quite slow start on the part of the company.

I think that we clearly have to try to see if we cannot do better in the future—that said, the efforts to pump the oil out of the tanker were themselves considerable.

And at the time we first looked at it when we were in Alaska, that was the calamity that was most immediately menacing—the possibility that because of the structural damage, pulling out of ten tanks and the precarious position of the tanker on the reef would cause it to break up and disgorge the rest of its load, which was three or four tons more than what was in the sound.

I think that one has to recognize that had come together satisfactorily, and we agreed with that priority. The protection for the fish hatcheries again was undertaken as a major priority before the immediate cleanup effort even, and that apparently is now something that offers grounds for encouragement.

There are, no doubt, a great many lessons to be learned here, and there is no shortage of groups that are now investigating—formal and informal—public and private, the adequacy of the response, the civil and criminal liabilities, and the changes that may need to be made in contingency planning there as in other places. I think all of that is going to go on. I am not prepared at this time to say who struck John or to try to do anything more than focus right now on the cleanup.

The CHAIRMAN. Senator Bryan.

Senator BRYAN. Mr. Chairman, thank you. I am not sure—gentlemen, with all due respect I am not sure that I have gotten a satisfactory answer to the question that Senator Stevens has propounded and the Chairman has followed up. I am not sure who is in charge here.

Your response, Mr. Reilly, sounded to me as a lawyer like a qualified response. You said the Coast Guard is with respect to the federal perspective. What I would like to know is if Exxon and the Coast Guard have a difference of opinion as to how one ought to proceed. Who is the lead dog in this operation?

Mr. REILLY. The question of federalization was one that we faced with the President right from the beginning, and he made it very clear that if that was something that needed to be done, he was prepared to do it.

In the conversations we had in Alaska, that was not requested of us. The governor did not see anything to be served by it. One had to ask the question what difference would it make if one were to

federalize this effort, would we undertake activities that the governor and others wanted to see undertaken that were not at that time already being addressed. So, that was the reaction in Alaska, that was what we reported back, and it was on that basis, I think, that the President made the decision he did.

Senator BRYAN. Mr. Reilly, I am not trying to be critical of you or the President. I am just trying to find out in the vernacular of the street who the hell is calling the shots.

Secretary SKINNER. Let me see if I can take another shot at it. The United States Coast Guard is in charge. The District Commander is up in Alaska and has been there almost from day one. He—Exxon is putting considerable resources, as I indicated to you a minute ago. Those resources are directed by the United States Coast Guard.

As I indicated to you before, if you look at the area, you cannot really—and Senator Stevens understands—you cannot really comprehend—and Senator Murkowski—until you get up there and see the vastness of this area and everything else. This chart does not do it justice.

The Coast Guard is protecting, is directing Exxon to protect the fish hatcheries, is working with the state, they are doing that. They have also got people down here at the far south end where they are protecting the new areas. They have got boom that they are putting in there.

At the same time the Coast Guard was working with Exxon and off-loading their tanker, 40 million gallons in about ten days. All of that is being coordinated. If something needs to be done, the Coast Guard tells Exxon what needs to be done.

That does not mean that they have a monopoly on expertise. There is a lot of expertise up there in the national response team, whether it is the NOAA person or—I will tell you Senator Stevens talked about the flow of fuel. One of the best sources of information on what was going to happen to this crude was from the fishermen who have been in that area 40 years watching the flow. They talked to the fishermen who are in that area who watch the flows every day. They were part of the group that we met with.

The CHAIRMAN. Mr. Reilly, we want to keep our commitment to you. You have been very good to come by, and you have got just a few minutes to get to our colleagues on the House side.

Thank you very much.

And, Secretary Skinner, we appreciate your courtesy in yielding.

As we see it, the call of recognition is Senators Packwood, Burns, Stevens, McCain, Gorton, Bryan, Kerry, Breaux and Rockefeller.

Senator Packwood.

Senator PACKWOOD. Mr. Secretary, rather than retrospectively try to figure out who was responsible for what, let us try to start from today because the *Exxon Valdez* wants to come to Portland, Oregon, to be repaired.

As I understand, it has now been floated off the reef, is that correct?

Secretary SKINNER. That is correct. It was floated late yesterday evening or late yesterday afternoon.

Senator PACKWOOD. Who is responsible as it plows through the waters to make sure that it is seaworthy?

Secretary SKINNER. The Coast Guard is responsible for that.

Senator PACKWOOD. And if anything goes wrong at sea while it is coming toward the Columbia River and up to Portland, it will be the Coast Guard's responsibility?

Secretary SKINNER. Well, I do not want to say that. I do not want to sound like a lawyer, even though I am one.

Number one, the Coast Guard has to make sure that the ship is seaworthy, but we are not piloting it down to wherever it is eventually going. That will continue to be the responsiblity of Exxon. If they run into a reef, even though we said this is open water, that is not the Coast Guard's responsibility, but, making sure it is certified, before it goes into open water, that is the Coast Guard's responsibility.

We have to issue the certificate to go forward. Once the vessel has been certified, it is the responsibility of the owner to operate it safely.

Senator PACKWOOD. Okay. Now, so it does not go anyplace until the Coast Guard says it is safe to go?

Secretary SKINNER. That is correct.

Senator PACKWOOD. Now, the Coast Guard looks at it and finally says it is safe to go, and it goes through the Pacific and comes to the Columbia River bar which is a difficult enough passage. Then it goes about a hundred miles up the river to Portland.

Is anyone other than Exxon responsible for it as it crosses the bar and comes up the river and gets to Portland?

Secretary SKINNER. Well, first of all, I do not know that the final decision has been made that it is going to Portland.

Senator PACKWOOD. Well, Portland has not made the final decision that it is coming to Portland.

Secretary SKINNER. I am not so sure Exxon—having heard how Portland feels has made a decision yet either.

Senator PACKWOOD. I am sure it will be welcomed someplace.

Secretary SKINNER. The Federal regional response team is going to be responsible for watching that vessel, if it were to go into the Portland area, to make sure that it is safe. And the important thing to remember is that, clinging to the vessel is a considerable amount of crude, and that is what your concern is.

Of course, as the fuel comes out, the water pours in the hole. So they have got to do underwater welding and then they have got to transport it with temporary fixes. The national response team will watch it as it goes into the port of Portland, if it goes there.

Senator PACKWOOD. And the National Response Team is chaired, if that is the right word. The Coast Guard is in charge of the National Response Team?

Secretary SKINNER. Yes. Captain Larrabee can further amplify.

Captain LARRABEE. Senator, the Coast Guard captain of the port in Portland has the authority to look at a ship like this and decide whether or not it represents a substantial threat to his port. He has the authority to then deny the vessel entrance to the port, and that decision process will take place in Portland, if that is where they decide to take it.

Senator PACKWOOD. I do not expect perfection out of the Coast Guard. If we wanted perfection, we probably would not have left

the era of hewing wood and drawing water. As soon as we started to create energy, we were going to run risks.

We can mine coal and move oil and split atoms. We have not yet perfected man. God has not yet perfected man, and I doubt if Congress is going to improve on God's efforts over the years.

But, at some stage you drill and rehearse and drill and rehearse and drill and rehearse and do everything that you can think of to avoid catastrophes, and they will still happen. But you can minimize them. All I am asking is that before the ship ever puts across the Columbia River bar, everything is done that can be thought of to make the passage safe.

Captain LARRABEE. Yes, sir.

Senator PACKWOOD. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Burns.

Senator BURNS. Thank you, Mr. Chairman. I guess I am like Senator Bryan. I just cannot believe that in an area that handles as much oil with good a record as we have had up there over time, that there is not a more specific plan of emergency response. In other words, just like we have our DES folks, disaster emergency folks, that there is not one commander-in-chief.

I have the feeling there are a lot of people running around and four or five chiefs and very few Indians, and I just do not see how that is coordinated. And I think probably I am going to have to sit down with you later on and have that explained to me.

But in the response to this thing, I just think it was a little slow and the coordination I know in the command in the military command or anything that you do, there has to be one person along with his advisors trying to coordinate the effort.

And I am just wondering if that was not sort of not the case in this instance.

Secretary SKINNER. Well, there is no question from my observation that it really did not come together until Monday evening. The response not only in the first five hours, but the first two days was inadequate, to say the least.

They had not planned for a catastrophe of this magnitude, and they had not had one, you know. The biggest spill before this one was 5,000 gallons, and now we are up to ten million gallons.

I think, as I said earlier, they got a little sloppy and a little complacent. When you do not have an incident, it is like you are not going to have a fire because you have not had one for 15 years. We know that is not true.

Also, and I will say this does not excuse what happened, it is a remote part of this country. Valdez has about 3,600 people. Cordoba has about 3,600 people. It is a vast amount of land.

It is served by two airports. The FAA put a temporary tower in there and had 700 operations when I was there on Tuesday, increased from about 20 before the spill. There is a massive amount of equipment coming in there constantly, but it is being brought in from all over. It is not available across the river. It is a thousand, 2,000 miles away. It takes some time to get it up there.

Senator BURNS. Excuse me, it is like Senator Stevens said. Probably one of the guys that knows more about that area than anybody else was not called on. It looks like these people should be in

the Rolodex files so that just as soon as anything happens, they are consulted. And this is coordinated by one person that can hit the button more or less and make things happen. And it just sounds like our planning for this type of thing could have been better—and I will tell you that you should always plan for the worst, and hope for the best.

So far we have had the best, but it does not sound like we planned very well for the worst.

Thank you, Mr. Chairman.

Secretary SKINNER. Senator, I would only say the State of Alaska—the Environmental Department of the State of Alaska—is part of the response team. I met with the head of that office. They are intimately involved in the decisions and recommendations as to where to put the boom and what people to call upon for expertise.

So, I think there was a lot of expertise—maybe all of the expertise in Alaska was not present, but from the people I saw when I was up there, there was a lot of expertise there.

Senator BURNS. Thank you, Mr. Secretary. That is all I have.

The CHAIRMAN. Thank you.

Senator McCain.

Senator MCCAIN. Thank you, Mr. Chairman.

Not to beat this issue to death, Mr. Skinner, on the who is in charge but, you know, I think you would agree that there is a perception on the part of the American people that not enough either was done and there is a perception, maybe inaccurate, that not enough is being done.

And this whole issue of federalizing this—I do not know if rescue effort is the right phrase—is one which from a public relations standpoint it seems to me would give confidence to the American people to know that the federal government is in charge of addressing what has been described by many as the greatest ecological disaster that we have experienced, and so my question to you is what is the downside to federalizing this operation?

Secretary SKINNER. Well, first of all, I agree with you. I think it is a perception that if the federal government takes it over, all will be well.

Senator MCCAIN. Or improved.

Secretary SKINNER. I went up with an open mind. Bill Reilly went up with an open mind, and the conclusion once we arrived there was that the earlier requests for federalization were no longer necessary. The primary reason is that unlike many companies, and I am not here to be an apologist for Exxon, they are spending a considerable amount of money on a daily basis in gathering the resources necessary to put into this effort. I mean, they have rented an office building there for the duration, which they have acknowledged is going to be months.

So, therefore, Exxon is putting millions of dollars in my estimation a day into this problem. They are basically doing whatever is requested of them because they recognize they are responsible for this, and that eventually they are going to be held responsible. I assume their lawyers have told them that.

Now, in that area you can only do so much at this particular time. Over a thousand people are involved. We have got skimmers

that are in boom and control a hundred vessels over there. Those hundred vessels and people have been working day and night.

It is not that they go back to the Holiday Inn to take eight hours' worth of sleep when they go back. They go back several hours. They cannot find a room in town.

You know, the logistical support for an operation of this magnitude is quite difficult. We are looking at alternatives to beef up that support because the long-term effort is going to be in cleaning up the beaches around Knight Island and some of those islands. That will be an extended process. That is not easily done.

The evidence from France is that when the military went in and cleaned up the beaches, they did more damage than good, in a way. If it is not a controlled cleanup effort over an extended period of time, more damage can be done to the environment in the cleanup than the actual spill itself.

So, it has to be controlled. More men and equipment are coming in there every day. Exxon is putting more in, the military is putting more in. I am not aware of anything that we have asked Exxon to do—and, Senator Stevens, I respect your comment, your sources of information are impeccable—that they have refused. And so I do not doubt that at all, I am going to check on that—but I am getting the impression from our people on the scene that Exxon is responding to what we requested them to do.

Senator MCCAIN. Well, Mr. Secretary, I again think you are dealing—and I would just like to repeat—I think you are dealing with a perception problem here. And I hope you would at least review the decision in light of the fact that I understand that Exxon has an abundance of resources. Certainly not the resources that the federal government has. They have a thousand people. I do not know if that is sufficient or not, but I would suggest that it would be of some comfort to Americans who—many of whom, with all due respect to my friend on my left, have never heard of Alaska—are terribly concerned, and they are concerned that the federal government is not doing enough. And that is where I think you have to reassure the American people.

Secretary SKINNER. I agree. I was out yesterday, but I was in contact with them and will be meeting at the White House later this morning on what other action we can take. This is a constantly developing problem, and we are trying to stay on top of it—with ten million gallons in the water, 100 mile spread, with weather and environment affecting its flow. It is a tough problem that requires all the managerial skills anybody has.

Senator MCCAIN. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Gorton.

Senator GORTON. Mr. Secretary, with all due respect to Senator McCain, I am not sure that your primary problem is dealing with perceptions. My inclination is the colors on that map are realities, not perceptions, and that is real oil. It is not——

Senator MCCAIN. If I could respond to my friend, I am talking about the perception that not enough is being done, not the perception that there is a problem.

Senator GORTON. And I guess I would like to ask you this. In one sense this whole disaster falls into perhaps three relatively independent periods of time.

The first is what happened which led to the accident, and we have plenty of time to examine that.

The second is what happened in those first 48 hours before you even arrived in Alaska, when quite evidently a great deal more could have been done by someone than, in fact, took place.

And the third, of course, is what happens in the later post-accident period in which we still find ourselves.

It is quite obvious that the amount of response which is in place now, had it been in place in the first few hours after the accident, would have had a much more salutary effect and impact.

My question on who is in charge and perhaps on the perception question of whether or not this administration has responded favorably is what difference would there have been had the federal government federalized this effort very early, within an hour or so after you got up Eastern Standard Time on that Saturday morning.

If the effort had been federalized, would Exxon have been under the control and direction of the Coast Guard and the federal government, would it have been required to deal with that response or could Exxon then have walked away from it and said it is your baby?

Secretary SKINNER. The answer is yes, it could have. The moment we federalize, Exxon's responsibility to provide resources ends. It becomes the federal responsibility to gather the resources. Eventually, Exxon's liability under current law is capped at $14 million.

Senator GORTON. All right, Mr. Secretary, that is a precise answer, and that certainly is a justification for your not having federalized it. At this point it is by far the best I have heard.

Senator McCain said, I guess the federal government has more resources than Exxon, but the Coast Guard does not have more resources nationwide than Exxon does, has it?

Secretary SKINNER. Well, I do not know about a balance sheet, but my guess is I would rather go with Exxon's balance sheet than the Coast Guard's.

Senator GORTON. I suspect after one of the comments over here about the way we have supported the Coast Guard here in Congress over the last few years that that is highly accurate.

Secretary SKINNER. Senator, I would add, to follow up on that point—and I do not mean to be rude—the appropriated fund that we would use for this effort right now is at $3 million. Exxon could be putting that much in every day.

Now, that means we would have to come to you for a supplemental appropriation, that you would move quickly and I assume we could get that done. Well, I would go to the Chairman. He could tell me how soon we could get it done.

The CHAIRMAN. Did the $3 million cause you to hesitate, or delay, in federalization?

Secretary SKINNER. No.

Senator GORTON. Now, Senator Stevens pointed out that the oil slick is now out side State internal waters. What would be the impact if you federalized that portion of this effort at the present time? Everything which is outside internal waters?

Secretary SKINNER. Maybe Captain Larrabee can answer that question.

Captain LARRABEE. The situation now is that the oil that is out there is in what we would call wind rows, a very weathered oil. It has lost most of its toxicity and in cases like this, we would hope that natural dispersion would take care of a great deal of that oil. The impact will be that, if it hits the beaches around Kodiak, Seward, or Homer, Alaska, we are making contingencies right now to protect those areas.

Senator GORTON. But that effort still is not federalized? It is Exxon's responsibility?

Captain LARRABEE. Senator, it is not federalized in the sense that we are paying for it. But in fact, the equipment that is being used, the direction that is being given, is all being done by the Coast Guard.

Senator STEVENS. Would you yield?

Senator GORTON. Yes, I would.

Senator STEVENS. Captain, I am told that right now there is a meeting going on in Alaska to work out a new command structure with the Coast Guard in charge of operations for the first time and Exxon in charge of contracting for equipment and paying the bills. Do you know about that meeting?

Captain LARRABEE. Yes, sir.

Senator STEVENS. Now, that contradicts what you just said. You have not been in charge yet. Is that not true? This is a new command structure. If a new command structure is needed to put you in charge, how can you say you have been in charge?

Captain LARRABEE. The on-scene coordinator has been in charge in terms of directing the technical aspects. He has used as an advisory group Admiral Nelson, Mr. Iarossi from Exxon and the governor's representative. I believe that the meeting you are referring to, as a result of a meeting last night with that group indicated that they wanted to see a stronger effort by Exxon now that the ship has been removed, to get the clean-up operation further along.

Senator STEVENS. And your on-scene commander seriously criticized the response efforts to date and asked for greater control on the part of the Coast Guard. Is that not true?

Captain LARRABEE. I am not sure.

Senator STEVENS. I again think that we are escaping the fact that the Coast Guard has not been in control.

Secretary SKINNER. I think what has basically happened is that the mission has changed now that the tanker is off-loaded. There are substantial resources that are now available. The off-loading of the tanker was primarily done by Exxon with the assistance of the Coast Guard, under the supervision of the Coast Guard.

We have now off-loaded that tanker. Now Exxon can redirect its resources, and we are assessing how they should be directed. If that means that we take a greater role in the deployment, we are going to do so.

That does not mean that the Coast Guard has not been giving directions. It is just that we are trying to formalize the process, given the new mission, which is the tanker off-loaded. It is number one of our major objectives. Now, where is the time and energy of Exxon going to go.

Senator STEVENS. I apologize for running over.

The CHAIRMAN. Thank you, Senator Gorton. Senator Bryan?

Senator BRYAN. Mr. Chairman, it seems to me if anything is clear this morning, we clearly need to revisit prospectively how we establish that command structure and if—as you are indicating, Mr. Secretary—one of the concerns that you had in response to Senator Gorton's question, that by "federalizing the effort" somehow that limits or restricts the liability of Exxon, which clearly from a legal perspective at this point would be the deep pocket, the primary liability in terms of whatever the ultimate cost is, we need to do that.

My question, in shifting emphasis and trying to be as brief as I can, is, is there any resource manpower or equipment, anything, if you had a wish list—if we were in a perfect world we would like to have more people, more equipment. Is there anything that you need at this point that you do not presently have to assist in the clean-up effort?

Captain LARRABEE. The Commandant's direction to the on-scene coordinator at the beginning of this incident was that there are no restrictions as far as the amount of resources that can be brought to bear on this incident.

That philosophy has pervaded the whole effort to this point and yesterday, at our national response team meeting, the same question was asked and each one of the federal agencies was polled.

At this point, no one in that group representing those 14 agencies gave any indication that there was a need to federalize, or that there was something that needed to be done that was not already being done.

Senator BRYAN. Well we do have difficulty communicating in the King's English. My question is not, are you doing enough. My question is simply, is there anything that you need—private sector, public sector, Congressional action, administrative direction—anything that you need in addition to what you have now in terms of resources? The answer should be no, or yes, we need A, B and C.

Secretary SKINNER. The answer, I think he said is, it is the opinion of all of the people on the scene, Senator, that everything is being done that can be done, given the problem. There is not a magic fix to this problem. That is what you have got to understand.

When you get up there you watch how it has moved and the vastness of it and you understand it is not a problem that is fixed by throwing money and equipment at it at this point. There may be a tuning here and a tuning there, but you know you have got about as much equipment right now as you can manage in that area.

Senator BRYAN. I appreciate the response. Am I correct in assuming that other vessels are now trans-shipping from Valdez?

Secretary SKINNER. Yes.

Senator BRYAN. So the port is reopened. There are other vessels that are now transporting oil from Valdez to Long Beach, or wherever, and the question that I have is, if I am correctly informed, the vessel that ran into the reef is a single hull vessel. Am I correct on that, captain?

Captain LARRABEE. Yes, sir.

Senator BRYAN. Should there be any interim, short-term, immediate types of actions taken in terms of the types of vessels? That is, should we restrict access to the port to only ships that have

double hulls? Would that not have been a safer means of transport, the probability of the spill having been reduced, even assuming that a ship with a double hull hit the reef?

Captain LARRABEE. Senator, right now I believe the situation is that they are transiting in daylight hours only with two tug assistance escorts. The question has been raised as to whether or not double-hulled vessels might have prevented this accident.

We have not had an opportunity to survey the damage on this vessel, but we understand that there was extensive damage, well beyond what a double bottom might have afforded protection for. The vessel drew 55 feet of water and is on a reef in 33 feet of water. The double hull would have been about six feet and I think that would have probably penetrated most of those tanks.

Secretary SKINNER. I might also add that if you break the double-hulled vessel, the water gets in between the two hulls. They had the designer of the boat up there to make sure, as they off-loaded, they didn't off-load in the wrong way and have the ship capsize.

With a double hull, there is another ingredient and that is the whole buoyancy of the vessel. When you hit a reef like this at 15 knots, going full-speed—you know, that is basically almost full speed ahead—you are going to rip a pretty good hole. The hole is so big and so large and so many of the containers—you know, the tanks—were hit that it poured out about 2 million gallons an hour. So a double hull might not—and probably a lot of people agree—have made a difference in a damage condition like this.

Senator BRYAN. I guess the final point that I would make is, I am sure that we are going to have your support, Mr. Secretary and the Coast Guard's and Mr. Reilly's as well. Clearly, we need to look at the present law insofar as it creates any confusion or limitation in terms of response based upon a perceived limitation of liability and I am sure that a number of members of the Committee are very interested in that from a prospective point of view.

Secretary SKINNER. Yes. I would only comment that, as I mentioned in my remarks during my confirmation, I identified that problem. It is a problem that has been going on the last two years.

I do not want to get away from this incident but the real problem I see is that, if we did not have an Exxon, if we had a vessel of this magnitude that was not protected with the assets of Exxon and was a fly-by-night foreign carrier, we would not have protection. We would not have the resources. We would not have the fund. So we have got to deal with it.

It got held up in the Senate on some liability issues on state versus Federal involvement and I think in that regard the House and the Senate have to forget their differences and we will work with them on it.

But it is a significant issue, it is a preemption issue—and I do not mean to minimize it, but the foreign protocols are something we have to look at.

Senator BRYAN. Thank you.

The CHAIRMAN. Thank you. Senator Kerry?

Senator KERRY. Thank you very much, Mr. Chairman. There is nothing more pitiful than a senator without a voice, right?

The report that you are going to be submitting to the President, are we presumptuous to believe that that will be made available to this Committee?

Secretary SKINNER. We made a verbal report. I assume we will eventually make some written recommendations on response, and then in that regard I think we would share it, as soon as it is done, with the Committee, because some of those recommendations will probably require legislation.

Senator KERRY. Let me just comment. This spill obviously raises a myriad of issues about control, about liability, about responsibility and preparation and so forth. But I think that one of the important issues raised by it is the question of state input prior to these things happening, consistent with the Coastal Zone Management Act.

Two years ago I introduced legislation creating a consistency provision which would have enabled the states to have greater prior input—not a veto, but greater prior input. Mr. Chairman, I am going to reintroduce that legislation—you were a co-sponsor of it—particularly because I am concerned in Massachusetts about the Georges Bank and the potential of drilling there and so forth.

But I think it is important, given the Supreme Court decision in *Secretary of the Interior* v. *California* and the whole question of what directly impacts or does not directly impact a state, that we rethink the state input ahead of time. Senator Stevens and Senator Murkowski are feeling the frustration their state feels about really being the victim here.

I look at the Alyeska program. I quote from it: "If the volume of the spill is not known the input into the computer program should be 74,000 barrels. This volume is the maximum probable spill volume for tanker accidents in Prince William Sound." Well, 74,000 barrels is 3.1 million gallons. This is three times that, obviously and that was barely one fifth of the total cargo.

So you are beginning with a plan that was faulty and you have got frustrated governors, frustrated environmentalists, frustrated fishermen, who feel like they are without input and I hope that my legislation can move.

Now, I think there are a lot of questions that are unanswered here, about the implementation of the drug and alcohol abuse process, whether prior testing was being done. The Coast Guard apparently did not know there was a testing kit on board. The test took place several hours later, and so forth.

There are many issues of culpability, but one of the ones that disturbs me the most is the question of the Coast Guard role in terms of the traffic system here. As an old officer of the deck on a ship I looked at the plotting of its course. There was plenty of time—I mean, a simple plot showed you going straight into the reef unless there was a change of course.

My question is, do ships actually receive permission from the Coast Guard before changing lanes, in the same way that aircraft have to receive permission in order to change vectors and air channels?

Secretary SKINNER. Let me explain that, as a pilot and as someone who has become familiar with it. Number one, you are not

under positive radar. In aviation you are under positive radar control.

Senator KERRY. I understand.

Secretary SKINNER. You get directions and you cannot deviate from those directions at a certain point in time, in the entire time you are under that control. In the case of Coast Guard and pilotage, you get permission to change channels, which this ship did, which was a normal thing, but its direction and course are not under positive radar control.

On occasion, they might give radar advisories, but those are not mandatory as they are in aviation and most of the time when you get into open water you do not have even advisories. It is not the practice. It is a very wide, expansive area and the captain of the ship is responsible for the pilotage. He is the equivalent of VFR.

Senator KERRY. Given the nature of the disaster and given the lessons learned here, do you believe that perhaps it would be advisable to have a positive control system?

Secretary SKINNER. I think we are going to want to take a good look at it and see if that makes sense, not only with current radar, but whether we should improve the radar. So I think that is one of the things we are going to look at.

Senator KERRY. Was the Coast Guard in radio contact with the ship during the incident?

Secretary SKINNER. During most of the time it was, yes.

Senator KERRY. Was there a plot made of the course change and was there a tracking of the ship subsequent to the lane change?

Secretary SKINNER. No. Once the pilot got off, I think at Bligh Island or Rocky Point and once the channel change was made to the other channel at the south end there, I do not think there was any other further contact.

Senator KERRY. During your confirmation hearing, you expressed a strong commitment to developing a national transportation policy and I wonder if, at this point, there are primary lessons and implications that you would draw with respect to the development of that policy?

Secretary SKINNER. No. I will say, just to report to the Committee, as long as we are here, that while the nomination process has gone a little slow I am moving ahead on my commitment to the Committee to do that and I hope by the end of this year to have that.

I would say that we have got to look at the way we are going to transport this product and how we are going to protect it, because this could happen again. The fact that we had only one in 6,000 shipments does not mean it cannot happen again. The contingency plan does not work. As you point out, it is for 70,000, not 245,000 barrels and we are going to have to look at it. There may be a role in the policy for that. But frankly, this is a contingency plan that has to work and it does not work.

Senator KERRY. Apparently Captain Hazelwood lied on his license renewal application regarding criminal convictions. Does the Coast Guard investigate all applicants for maritime licenses to ensure that the answers are truthful?

Captain LARRABEE. Senator, this is not really my area of expertise and I would be stretching my knowledge of that particular

point to give you a definite answer. I will be very happy to give you an answer shortly.

Senator KERRY. I appreciate that.

The CHAIRMAN. Very good. Senator Breaux?

Senator BREAUX. Thank you, Mr. Chairman. Welcome back to the Committee, Sam. In the last six weeks you've had a major airline strike and a major oil spill. Are you having fun yet?

Secretary SKINNER. Plus a couple of other things.

Senator BREAUX. Let me ask a little bit different approach on it. How in heaven can we have a system in place that would prevent a person from operating a station wagon on a freeway on New York, but allows him to operate with that kind of a record, a major super tanker fully loaded with oil in a very potentially treacherous area?

What kind of a system does the Coast Guard have that allows that to happen? What kind of standards do we have for selecting captains that allow one with a drunken driving record that has caused him to lose his license to operate a car, but would allow him to have a license to operate a super tanker?

Who in the Coast Guard is responsible for that, or in the Secretary of Transportation's Office, which would allow literally a convicted drunk who is undergoing treatment—and I respect that, but how can he get on the bridge and be a captain of a super tanker with that kind of responsibility? What system allows that?

Secretary SKINNER. Well, obviously, there are two systems. Number one, the company system, because that raises serious questions at Exxon and they will address those. Number two, is we do have some steps in place for drug and alcohol abuse but the issue is that they have got to define on the thing whether they have been convicted of any offense other than minor traffic violations.

I am not sure what system we use to check the validity of the information that is provided; and then of course they have to disclose whether they have been addicted to narcotics. There may be grounds, if they disclose them on the form, for denying a license based on alcohol abuse.

Senator BREAUX. What is wrong with the system, from an early preliminary view, that allowed this to happen? I mean, here is the largest U.S. tanker in the fleet being operated by a person who has been convicted of DWI, who cannot drive that station wagon but is allowed to drive and to captain the largest super tanker in the fleet?

Secretary SKINNER. Well, although he was required to do so, he did not disclose his DWI and so there is a failure. It is like somebody that goes in to buy a firearm and does not disclose he is a prior felon.

Senator BREAUX. Okay. Well, the guy could be a terrorist and get a license to operate a super tanker under our system. Is that right? If he just says, I have never been a terrorist, I have never been a drunk, I do not use drugs and here is my license. I mean, that is the system we have, is what you are telling us.

Secretary SKINNER. I think the main backup that we rely on is the company's background investigation of its employees. We do not have—to answer your question directly, senator, we do not have a system where we do background investigations on every pilot, on every vessel that is hauling commodities in this country.

Senator BREAUX. I would suggest that a captain of a shrimp boat that is 60 feet long, we can buy that, but a super tanker loaded with volatile material—well, that is another question.

Let me ask another question. In New Orleans, in the Gulf, we have three sets of river pilots that board a ship from Baton Rouge to New Orleans, from New Orleans to Pilot Town at the mouth of the river and from Pilot Town to about 20 miles in the middle of the Gulf.

Those pilots are on those ships every day and that is all they do and that is the only place they go. They can do it blindfolded. Why was a pilot not running the ship and when did the pilot get off? He was still in the channel. Why was a pilot not running the ship instead of a sleeping captain?

Captain LARRABEE. A state pilot is required, Senator, until Rocky Point, which is considered to be the most dangerous part of this transit. At the same time, the master of the vessel had pilotage for all of these waters and once the state pilot is off then an individual with that pilotage endorsement is required to take the vessel.

Senator BREAUX. Okay. The helmsman or the third mate who was actually commanding the bridge was not a pilot, was he?

Senator STEVENS. Would you yield just a second, Johnny? Ask him where the requirement was when we began transporting out of Valdez—to Hinchinbrook. The pilot stayed on to Hinchinbrook.

Senator BREAUX. I mean, Senator Stevens is totally correct. I mean, why do we not have a pilot on board until he passed all those islands and gets out in the channel and is in open waters? Why is that not a Federal requirement?

Captain LARRABEE. The pilotage endorsement on the master's license gives him the right, under our law, to pilot that vessel in those waters.

Senator BREAUX. What requirement do you have that the pilot's in command of the vessel? I mean, in this case the guy who was in command was not a pilot. Right?

Captain LARRABEE. No, sir. But the master should have been on the bridge.

Secretary SKINNER. There is no excuse for the fact that a man who was licensed and, if sober, properly qualified to make this trip was not at the bridge. That is a human error of major magnitude. He should have been there. It is like having the captain of the airplane sit in the back sleeping and having a flight attendant, or the flight engineer, up in the left seat.

That is against the law. It is prosecutable. It is a human error of major magnitude and we can do only so much. If someone is going to violate the law and just deliberately ignore his responsibilities as a captain and put somebody up there who is not licensed——

Senator BREAUX. I will tell you what we did not do in this case. We did not check to see whether that captain was qualified to get a Coast Guard license. He was able to operate a ship with a valid captain's license, that was stamped with approval by the Coast Guard, with that kind of a record is unacceptable.

I mean, what we have found out is that there are really no checks on these people and again, the extreme example of a terrorist getting a captain's license because he knows how to run a boat, or a drug addict, or someone with a horrible record could get a cap-

tain's license to run a super tanker under the current system, because you do not check.

Captain LARRABEE. The current procedure is to do a criminal background check.

Senator BREAUX. What happened here?

Captain LARRABEE. In this particular case I do not think that the problem was picked up on that check. His renewal was for a five-year period, and I believe his renewal was in 1986.

Senator BREAUX. Well, I think, Mr. Chairman, you know, we have looked at what we are doing since the accident, but this was not an unavoidable accident.

Admiral Yost said a child could have navigated this ship through a ten-foot wide channel—excuse me, a ten-mile wide channel. Whatever it is, approximately a ten-mile wide channel, and yet we have a system that is incredibly broke that allows that type of captain to be in command.

The CHAIRMAN. On that score, about the third mate, were the first and second mates qualified, Captain Larrabee?

Captain LARRABEE. To my knowledge, Mr. Chairman, the only individual on that vessel that had that pilotage endorsement was the master.

The CHAIRMAN. So, you are telling me that we do not have a co-pilot like that plane that Secretary Skinner is flying. We have got a pilot and a copilot. Whenever the pilot becomes disabled from a heart attack or illness or whatever, then we are just with a million barrel supertanker just at risk?

I mean, I understand the third mate could not tell the difference between actually operating and the automatic pilot. He could not tell when the red light, the buoy marker was on the wrong side of the vessel. Is that what you re saying? In other words, we have just one man? This is how we operate those supertankers, and once that master, if he becomes ill, there is no copilot and no backup whatsoever or qualification? Is that the Coast Guard requirement?

Secretary SKINNER. It is my understanding that the mate did have certain pilotage authority in open water. The issue is what pilotage he had.

The CHAIRMAN. I am not talking about open water.

Secretary SKINNER. When I say open water, I mean down further south, Senator.

The CHAIRMAN. Well, we do not need to argue about the water. If you take off the harbor pilot that carries out to that particular point and a ten-mile wide area with buoy markers and the red light, a man has got 20–20 vision can see—it was a clear night—whether it was clear visibility, right?

Captain LARRABEE. Yes, sir, to my knowledge.

The CHAIRMAN. And he could see the buoy marker was on the wrong side. Anybody who had been on a ship could tell that, and he could not tell the difference of it being on automatic pilot when he saw it to try to steer it clear, that it was not responding?

Now, that is a pretty bad dereliction on the part of our Coast Guard requirements, that one fellow and one fellow alone is sufficient on a supertanker.

Excuse me. Senator Robb.

Senator ROBB. Thank you, Mr. Chairman. I apologize. I have had other commitments and have not been able to attend all of the hearing this morning, and some of the questions I was going to ask have been addressed.

I understand, however, that the overall monitoring question may not have been addressed in terms of the Coast Guard responsibility. It is my understanding you used to have two people that had some position of responsibility for monitoring traffic in this particular area, and more recently there was a single person. Did that have any impact on the ability to exercise oversight in the area and is this a result of budget cuts or other areas that we ought to be responding to in a broader sense?

Captain LARRABEE. Senator, I believe that is still under investigation, my knowledge of that particular area is not extensive. However, I believe that evening that was not a factor. The ship had cleared the most difficult part of the transit, and there was no indication that there was any problem as far as the procedures, as far as the vessel traffic center was concerned. I would not think there were any limitations on the part of the traffic controller that evening.

Senator ROBB. Does the Coast Guard, though, maintain positive control until the ship is completely clear of the area where any potential hazard could exist? In much the same way that I think people would relate to an air controller having positive control over aircraft in particular areas, does the Coast Guard maintain that kind of control?

Captain LARRABEE. No, sir. The system does not provide that. It is an advisory system, and the pilot is required to provide that.

Senator ROBB. One other question if I might ask with regard to the cleanup. I understand the responsibility has been pretty well covered this morning and a two-month time frame has been established, but I do not know there was much description of the specifics of what is going to happen in the next couple of months that we might be able to monitor both in terms of public interest and in terms of this committee in terms of the cleanup effort.

Secretary SKINNER. Well, number one, the cleanup effort is to contain around the fish hatcheries, Seward and the other areas south.

Number two, the cleanup effort is going to be then moved to the beaches all along the sound there, because that is where the crude has now drifted up, as in the case of Naked Island. It all surrounds the island, and there is going to have to be a cleanup effort similar to what has existed in France and other parts of the world. It is a multi-month commitment.

Senator ROBB. That is a multi-month commitment. In other words, the initial phase will be some two months. Then whatever is necessary beyond that period?

Secretary SKINNER. Yes. Everybody is getting ready for an effort that is going to take a number of months, and it will be very manpower-sensitive rather than equipment-sensitive.

Senator ROBB. Thank you, Mr. Secretary, Captain Larrabee, Mr. Chairman. That concludes my questions at this time.

The CHAIRMAN. Very good.

Senator Danforth.

Senator DANFORTH. Mr. Secretary, Senator Murkowski is not on the committee, but he has been here, and he is of the view that if the President were to declare an emergency and if the cleanup were to be federalized under the Clean Water Act, Exxon would still be liable to pay for the cost of the cleanup. Is that correct?

Secretary SKINNER. It is not quite that easy, but they do not get off scot-free. There is a fund that is available and then after that they are still liable. So, Senator Murkowski is absolutely right. Collecting on that has been somewhat difficult.

The *Amoco Cadiz* case in France has taken 15 years to recover that effort. Captain Larrabee, do you want to comment?

Captain LARRABEE. My understanding of the present law, Senator, is that Exxon's liability is $14 million under the TAPS legislation. Once that is exceeded, then there is an additional $86 million that can be made available from the TAPS fund. Once that $100 million is exceeded, all claims, including those of the United States Government, would then be spread out evenly with the claimants. But I do not know that we have ever had the opportunity to exercise that fund to its magnitude.

Senator DANFORTH. Mr. Secretary, I am not prepared to debate the law. I do not know the answer to it, but I do know that the Alaskan delegation in the Senate, together with the Governor of Alaska, take the position that this should be federalized and that even if it were federalized, Exxon would still be liable, and I wonder if you could recheck the law and communication with Senator Stevens and Senator Murkowski on this subject so that all parties could be satisfied that this is being handled correctly under the law.

Secretary SKINNER. We are in daily contact, and I assume we will be in contact. I am sure there will be another meeting today. I know there will be another meeting today at the White House on this. The issue is to make sure in the quickest possible time, on the most coordinated basis, that all of the necessary resources are in Alaska to deal with this problem.

And federalization, per se, creates certain impediments, but we are looking for a way to make sure that everybody is satisfied that the federal effort is the right effort.

Number two, all the effort is being coordinated by the federal government and the Coast Guard and we want to make sure that there is no jockeying for position or jurisdictional disputes. I think that is the major objective. Whether that is federalization or a hybrid of that, we will have to wait and see.

Senator DANFORTH. Mr. Secretary, it is my understanding that your testimony is that everything that can be is being done to stop the spread of this oil spill, to clean it up, and to mitigate the effects of it. Is that right?

Secretary SKINNER. I think that the consensus of the experts who are on the scene there are of the opinion, which still is an open issue, with the exception of the federalization effort that the effort that is currently in place or on its way is the maximum realistic effort. If something else has to be done tomorrow, it is going to be done.

I have seen no one say that we are holding up doing something if it makes sense.

Senator DANFORTH. The administration is not trying to get off the hook somehow or to prevent spending money that should be spent by not going forward with federalization?

Secretary SKINNER. No, I have got a horrible budget problem, but you and I and the House are going to worry about it afterwards.

You know, Admiral Yost and I have just thrown the Coast Guard budget way out of whack here to deal with this problem. I mean, we have got all kinds of expenses that we hope we will get reimbursed, but I am not letting that get in the way.

I am saying this. I think that I can come to you and explain what happened, and we will work it out. I cannot afford to let budget get in the way right now of the Coast Guard effort, and it is not.

Senator DANFORTH. Good for you. I can assure you that everything that this committee can do will be done to reimburse you for whatever expense is necessary. But your opinion is that everything that should be spent usefully is being spent and that that will continue to be the case?

Secretary SKINNER. Well, I am not aware of anything that exists right now, although that situation changes and things happen every day. As the problem changes, then we get in more equipment. We get in more boom. We have got more skimmers on the way because of the way it has spread, and so we are daily assessing that.

But as of this moment, I have not heard anybody tell me they needed anything that they are not getting.

Senator DANFORTH. Now, I have been told there is a manpower problem and that there are a lot of people in Alaska who would like to help out, but that Exxon has a problem and is concerned about possible liability, tort liability, should it take on extra personnel. Do you know anything about that?

Secretary SKINNER. Let me see if I can explain this without it appearing to be an excuse, because it is not.

Number one, the resources in that area at Cordoba and Valdez are stretched to the absolute maximum.

Number two, this is area that is uninhabited, and so if you are going to put 500 people or 200 people on the island for cleanup, they do not commute home every night. They are there for the duration. You have got to feed them, you have got to house them, you have to medically support them. It is an area where accidents could occur. And, more importantly, you have to train them in the proper technique for cleanup.

When the military went in in France, as I said, it was reported by some environmentalists they did more damage than good. So, right now where most of the resources can be put to work is in the cleanup effort. That is where a lot of Alaskans want to help, and right now they are not in a position to logically support that, but that cleanup effort is not something that is going to disappear tomorrow, Senator Danforth. That is going to be there for a period of time, and I would suggest as time goes on you will see more and more Alaskans involved in the cleanup effort. It is a matter of supporting them once they are on the scene.

Senator DANFORTH. Now, I am told the Governor of Alaska has written a letter, I guess to the President.

Secretary SKINNER. Yes, I saw a brief copy of it this morning. He seems to have changed. I have talked to him on several occasions. He seems to have changed his mind.

First he wanted federalization, then he changed his mind when I was up there and met with him and he asked us not to do it. We thought his judgment was the correct one, and now he has changed his mind again, and we need to find out why. He did this last night about 8:00, I believe.

Senator DANFORTH. And the President or you will, of course, respond to that?

Secretary SKINNER. Well, the letter is actually addressed to Rear Admiral Nelson who is the 17th Coast Guard District Commander, who happens to be in Juneau.

And they have asked that the Coast Guard assume a greater role. That is in the process of being assessed anyway. I will share this with the whole committee.[1] It just came in yesterday afternoon.

Senator DANFORTH. Thank you, Mr. Chairman.

The CHAIRMAN. Very good.

Secretary Skinner, I think that chain of culpability goes to the Pipeline Act where we put in the $100 million cap on liability, but then you have got the 1851 act, the worth of the vessel and the cargo under maritime law, and then you can come to privity of knowledge proof to proceed fully under state and federal law. And I am sure Exxon knows this and knows it well.

And so I think your first comment that they have got enough money is right in order.

Senator STEVENS. Would you yield on that just for a second?

The CHAIRMAN. Yes.

Senator STEVENS. Mr. Chairman, there has been a little misinformation here, and having lived through all of this, there is no $14 million limitation on this spill. We put an assessment of five cents a barrel on all oil coming out of the Alaskan pipeline until we reached $100 million. That has now accumulated to $278 million. It is under control of the consortium and, as I understand it, all $278 million could be made available to pay the cost of this spill if the consortium decided to do it. $100 million is in the TAPS Act for a limitation on one instance. That would be this one, but the extra money could be made available.

That, incidentally, has nothing to do with the question of fault. The whole concept of liability without fault was involved in that $100 million.

Exxon has announced that it accepts the responsibility for all of the cost of this. There is no question of liability without fault. This is liability with negligence. I mean, clearly there is no limit. There is no limit.

Secretary SKINNER. I do not think we disagree. It is a mechanical situation. Number one, $14 million is their first contribution. Then the fund is available up to $100 million. If they want to make more available, they can and, whatever is left after everything is paid out of the fund, Exxon is going to be liable for under various legal

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[1] See p. 5.

theories, including some very good common law theories that the former trial lawyer from South Carolina mentioned.

Senator STEVENS. In addition to that, they have $400 million insurance, I understand, so we are not talking about nonavailability of money.

The CHAIRMAN. We are going to move on to the chairman of Exxon, who has obliged us by attending, and he waiting now to tell his story. But let us first hear from Senator Exon.

Senator EXON. Mr. Chairman, you have made that pronunciation of my name incorrect for ten years now. I have not objected to it previously.

But I would state for the record that the name is "Exun." It is E-x-o-n with one x. I have often said the other people are the double cross boys.

And they are now brought further disrepute on the once honorable name of Exxon. Let us get on with the matter at hand here, and I thank you very much for being here, Mr. Secretary. Thanks for going up there. I thought it wise the President sent you up to look at the situation, and we want to do anything that we can here with legislation, and that is the real reason for this.

In your opening statement—and I am sorry that I was not here for it—I was over chairing an Armed Services matter on another cleanup of the nuclear waste of our defense facilities, which is a problem, also—you said that your department did not have access to the National Drivers' registry. I had a similar bill in that area last year to allow the railroads access to drivers 'information. We did not think of sea captains, but there is no reason why they should not be put in under that.

Secretary SKINNER. We agree.

Senator EXON. Let me ask this question about the future. Let us look to the future just a minute, then I will return in the second part of the question to the past.

There are those of us who have looked at what future oil developments in Alaska would do to that great pristine country, and I recognize that the State of Alaska and their representatives have some strong feelings about this. Is this a typical—in your opinion, is this a typical irresponsible action that should never have happened or is this just one of the threats and one of the risks that we take when we start hauling toxic substances like oil around on and off our shores, especially in a pristine area like this? And I am talking about the North Slope Accord, and what do you think this is going to do to further complicating the problems that we have been wrestling there with for a long time?

Secretary SKINNER. Well, it clearly could have been avoided. It clearly is, from what the preliminary reports show, an act of negligence, significant negligence. We cannot mandate acts of negligence. They are going to happen on occasion. Hopefully we will learn from this experience and put in some safeguards so it cannot happen again.

However, we have had some 6,000 vessels traffic that area without a significant spillage until this. I think that speaks fairly well for the ability of the system to handle the traffic. We have just got to make sure that we learn from this experience and make sure

that we are doing even more. You know, that is not the best record in the world, but it is also not a bad record.

Senator EXON. Mr. Skinner, let me get into this matter of how we are going to pay for these cleanups now and in the future. I do not want the American taxpayer to be stuck with these cleanups which I am afraid to some extent—well, maybe in this case we can recover all of the cost from Exxon, I do not know.

There are other oil companies that do not have the resources of Exxon. There are other oil companies that we may have difficulty suing or getting money out if there would be a repeat of something like this in the future. Would not it be wise for us to establish some kind of a cleanup fund that would be reserved in an amount available to be paid by people who haul or ship or transit oil in some fashion so that we can clean this up in the future and have a ready fund there of a sizable amount, maybe give the people who move this oil around more responsibility than they have now? If they had to pay something for every barrel of oil they moved, would it not be wise to protect the taxpayers with a fund?

And also I wonder about how we would get at foreign companies that are not as easy for us to bring to bear legally as it is the Exxon Corporation if we had these things in the future.

Secretary SKINNER. Yes, we are fortunate here. First of all, the legislation that was proposed last year saw differences of opinion between the House and the Senate. I am hopeful we can resolve those differences and move forward with some legislation that will protect the situation.

In this case, to some degree, we are protected because Exxon is the shipper.

In other situations Exxon is not the shipper.

Unless we get an internationally enforceable piece of legislation, we are not going to be able to deal with the problem if it were ever to occur in international waters or down in Florida where it would go off into in international waters and the ship was an international ship. And so we do need legislation.

We look forward to working with it.

As I said in my remarks during confirmation, I think they are pretty close.

I think this experience is going to cause legislation to move this year.

I am willing to work with you on that.

Senator EXON. I hope we can get something active going on that. I am a little wary of the American taxpayer being expected to bail out the S&L industry and now there are proposals that the American taxpayers are going to guarantee and maybe eventually bail out all of the international bankers who have made lousy loans to developing Third World countries.

More and more I think the American taxpayers are beginning to wake up to the proposition that they are being asked to guarantee everything for everybody. It is about time we passed legislation to make sure that the people who are responsible directly for most of these messes that we get ourselves in do not fall back on the taxpayer.

And I think a fund both for our people who move oil and who are under our direct corporation laws and international laws is just

a must, and we want to work with you on it, Mr. Skinner. Thank you, and thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Pressler.

Senator PRESSLER. Just let me ask one question, and maybe this has been covered. Just to get your views, should random drug and alcohol testing be required for persons in control of oil tankers?

Secretary SKINNER. I think we probably ought to take a good look at it.

Let us take the drug testing. As Senator Hollings and I have discussed this whole issue of alcohol, I think we are taking a good look at drug testing. I do not want to lose, I do not want to tie up the drug testing program that we have now while we work on the alcohol problem. We want to move that forward. But I think we are going to be doing some kind of program involving random testing of pilots along with the initial licensing process as well.

Senator PRESSLER. I find a growing concern in the country, growing support for random testing, random unannounced testing of people who operate trains, buses, airplanes, things moving, and certainly nobody had thought of oil tankers, and yet our labor unions and others say this is a violation of individual rights. Certainly a lot of taxpayers' rights and environmental rights have been violated here. How cumbersome would that be to have random drug and alcohol testing for people in control of oil tankers?

Secretary SKINNER. Well, I cannot answer the alcohol issue. I can the discuss drug testing.

We are working on implementation of the most comprehensive rules in any department of government. Transportation has the most comprehensive random testing program in government. It is not only employment.

But random alcohol testing is a whole other area we have not dealt with, and we are going to deal with it. That is more complicated because in many respects it is not only a Breathalyzer but a blood test, and so it is more complex. We have nothing for alcohol at this point, and we are going to have to look as to where we go on that.

The real key, as Senator Breaux said, is to catch a known alcoholic at the beginning and deny him a license much the way we deny someone a driver's license.

Senator PRESSLER. I have a question here, a very quick question. The Coast Guard radar station at Valdez cleared the vessel to change lanes outbound. Two sea traffic controllers hired by the Coast Guard were on duty. They gave permission from Valdez to change lanes because of ice, yet they never called the ship or watched on radar to alert the ship that it was on course to hit the reef. Is that correct?

Secretary SKINNER. Well, Captain Larrabee can address this, but they did get permission. It was regular permission given. It was not out of the norm to change channels if there is no upcoming traffic.

As we indicated earlier, they were not under positive direction of radar control. It is their responsibility and not the Coast Guard's to tell them what direction to go.

Captain Larrabee may want to expand on that.

Captain LARRABEE. The Secretary is correct. The system does not provide positive control over the vessel. It is the pilot's responsibility to ensure that the course heading is correct.

The CHAIRMAN. Ted, let us see if we can move on to the chairman of Exxon.

Senator STEVENS. I know we should move on, but the original radar that was put in there did control beyond Bligh Reef. The Coast Guard modified that several years ago to a shorter range radar that does not go to Bligh Reef.

I think, you know, Captain, the Coast Guard has got to answer to that, too. We protested that at the time.

Secretary SKINNER. I am sure, Senator, the National Transportation Safety Board will discuss this in depth, and we are committed to work with them, and we ask for it.

The CHAIRMAN. Secretary Skinner, thank you and Captain Larrabee very, very much.

We have several other witnesses. We want to get to the chairman of Exxon and then momentarily Admiral Yost will be over and thereafter we have our two witnesses from the Fish and Wildlife Service and NOAA, so we will move right along. We thank you very much for your appearance here this morning.

Mr. Rawl, we would appreciate hearing from you now, sir. Mr. Rawl, we have your statement. It will be included in the record in its entirety, and under the circumstances, you can deliver it in its entirety, if you wish, or summarize, either way.

STATEMENT OF L.G. RAWL, CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER, EXXON CORP.

Mr. RAWL. I will summarize my statement.

I am here to provide a frank response to questions regarding the Exxon Valdez oil spill and to describe our continuing efforts to deal with its consequences.

Before I do this, however, I want to express my sincere regret as to what happened on behalf of all the employees of Exxon and certainly on behalf of myself. I really cannot tell you how sorry we are this disaster occurred, and we are particularly sympathetic to the impacts on the residents of Alaska and particularly those in the Prince William Sound area. That is where the spill is creating a great deal of problems.

As has been said many times this morning and by us earlier we take full responsibility. As we have done from the beginning. We will continue doing all we can to clean up and mitigate the spill's effects and all necessary resources are being fully employed.

It has already been mentioned by Secretary Skinner that the environment in this area, its remoteness, the high tides and the associated physical problems make it a particularly difficult problem.

A few comments about the spill, just to put it into perspective. As mentioned before the spill is estimated at 240,000 barrels which occurred early on March 24.

We have other factual information. The weather was clear. The ship had no known mechanical difficulties. A course change was requested and authorized because of ice in the outgoing channel.

The captain subsequently left the bridge and tests made sometime after the grounding showed the captain's alcohol level was above the limits established by the Coast Guard. That is clear.

There are still many unanswered questions as to what occurred during this period. We are conducting, of course, not one but many investigations within the company as are the National Transportation Safety Board and the Coast Guard. There are other federal and state investigations underway, and we are participating in all of those.

The oil spill contingency plan was activated immediately. It called for a two-phased response. The first phase was the responsibility of Alyeska. The second phase was our responsibility as the shipper, and our response was immediate.

We immediately established the priorities. The first priority was to prevent additional spills from the damaged tanker which had approximately one million barrels of North Slope crude on it, and certainly to try to immediately mitigate the impact of the spill on the environment and the people of Alaska.

A major mobilization began immediately and by now involves, as the Secretary said, many hundred of people or thousands of people, a lot of boats, planes, helicopters etc. I will not go into all those details.

Currently we are receiving support from a large number of organizations. We have a large number of experts, academics and so forth under contract, and we have 200 Exxon experts and other consultants that are managing to manager our part of effort. We are mobilized to mitigate the economic impact on the communities of Prince William Sound.

The claims office is staffed by 30 people. It is open and adequate funds are in accounts in local banks. Those funds are available to provide immediate advance payments to those requiring monetary support while claims are being prepared, reviewed, and processed, and I have insisted that that be done as expeditiously as possible. Our intention is to provide fair, reasonable and prompt settlements.

As of noon Tuesday we had recovered the remaining oil that could be removed from the tanker while it was on the reef. That oil is out of the ship and on its way to our west coast refinery.

As I am sure most of you read in this morning's paper, the ship was successfully refloated, and it is now in an inlet adjacent to Naked Island where we will do temporary repairs. And when that is completed, we will take the ship into an available dry dock and repair it permanently.

Just a couple of more comments. For now, it is too early to assess the long-term environmental damage. Natural resource damage assessment studies are underway as has been mentioned. A number of them are being made with the EPA others and NOAA involvement. We also are having a number done ourselves.

We cannot judge how long recovery will take in Prince William Sound, but I can assure you that since March 24th the accident has been receiving our full attention and will continue to do until the job is done.

We are continuing to cooperate fully to establish the facts as to what happened. More importantly, however, we want to help in

any way we can to determine what might be done to reduce the chances of such an incident happening again. I can assure you actions are already underway within Exxon to revise policies and procedures in the light of this accident and to preclude what happened from happening again.

The CHAIRMAN. Exactly on that point has Exxon learned, Mr. Rawl, not to risk such a valuable cargo and such an immense vessel the length of three football fields which takes a couple of miles or so to even turn course, to risk that to just one pilot and not have a copilot?

I mean is that—right now if I went out on, let us say, three or four other Exxon supertankers this morning, would I find only one pilot, master pilot, licensed and capable?

Mr. RAWL. No, sir. The Prince William Sound area is unusual. Most of the three mates plus the captain are licensed to pilot the ship in many areas and on the open ocean. In Prince William Sound, as has been said many times this morning, the state pilot takes it to a certain point, and then—the sound system is not working properly can you hear me? I know it goes on and off.

The CHAIRMAN. Please try to talk a little louder.

Mr. RAWL. But in this case the pilot was also the captain. Obviously we had no knowledge that he was impaired.

I think it is possible, however, as I understand the law there, to have two mates on the bridge at the same time in a case like this so you could do what needs to be done to navigate the ship when you have ice in one channel and a great deal of concern about that. I am not trying to make any excuses but the facts are that there are ways to do that. If, in fact, as you suggested in your earlier conversation with Secretary Skinner, that a captain had a heart attack or something similar then there were other options available.

Now, the same impairment, apparently, that created the spill to begin with, created a situation where the master could have brought another officer to the bridge. There were actually four people on the bridge when the skipper was on the bridge. There was a lookout on one of the wings. There was the person in charge which then was the captain. There was a third mate. It was his shift, and there was also the man steering the vessel or the helmsman. So, that was the situation.

If the captain had sent for another mate before he went below, as I understood it, that would have been legally responsive regarding whether or not the ship would have hit the reef, I would expect it would have had a much better chance of getting through there. I have had a lot of difficulty understanding this accident myself, I can assure you.

The CHAIRMAN. Well, I think that is the first lesson we have learned this morning about the copilot. It is thoroughly equipped because the person—the second mate wasn't a qualified master as is required in those waters.

Now, you said, of course, you did not have any knowledge, and yet they will say in the law that—does the record show that this particular master of the vessel had three convictions of driving under the influence of alcohol? In other words, he had an alcohol problem?

Mr. RAWL. Yes, sir, it shows that.

The CHAIRMAN. That would scare me to death in a board room if I were there on Exxon's board if you told me that that fellow had three convictions running with that expensive cargo. That magnificent vessel is only three years old.

I would say look, I mean, we are not that short of masters. We are grinding them up there in King's Point at the Chrysler estate in Long Island. We could give you all the masters you want. I mean, you have got no explanation for that.

Mr. RAWL. No, sir.

The CHAIRMAN. I am not going to try to press that point.

Mr. RAWL. Well, let me just tell you, we have some programs in place. It came up a little bit earlier, regarding random testing for drugs and alcohol and the difficulties in some cases negotiating those. We can impose testing in certain instances, and we have imposed it. Not before the spill, but we have got it in the revised policy, and we are going to do it. If we get lawsuits on it, we are going to take the lawsuits.

I would have felt a lot better had we taken a lawsuit on this and then said well we went to court and we lost, rather than the situation we find ourselves in now.

Now, Senator, there is more to this alcohol question, and you are probably aware of it. Let me clarify a little further.

We did not know about the DWI's and, of course, I had never heard of this man until two weeks ago. So, obviously, I am not looking for any sympathy, but we did know he came in, as I understand it, and said he had an alcohol problem a number of years ago. He was rehabilitated. That was consistent with the alcohol policy.

However, the judgment to put him back on the ship is a judgment made at an operating level. Obviously, it was a bad judgment. It could have been a bad judgment in a lot of people's eyes on a going-in basis, mine being one of them. But in any event, I just want to make that clear in case you had not heard of that. I do not want you feeling that I did not level with you when I was up here.

The CHAIRMAN. I appreciate that. The third mate, now, you find no culpability there, I take it, because while you fired the master, you now have corporate counsel representing the third mate, is that right?

Mr. RAWL. Well, you find yourself in this kind of a situation, and I am not too expert in these matters, but I have asked these same questions. In the case of the captain initially, we told him to get his own counsel for his protection. This was before we knew that the alcohol situation would show up. And, by the way, the results of those tests did not show up as you may recall until several days later.

But we knew that when the ship ran aground and he was not on the bridge, we obviously had a conflict between the corporate interest and the individual's interest, and so we said you get your own counsel. We will pay for that.

When we found out, however, there was alcohol involved and the other circumstances—we found out he violated a number of company policies—he was terminated.

Now, in the case of the third mate, he is in the early stages of the discovery process. There has been to my knowledge, no testimony taken under oath in this case yet because the National Transportation Safety Board is still developing the hearing date. So far everyone known to be involved has been interviewed by NTSB representatives, by the Coast Guard, by Exxon and so forth. We have to let this investigation get into the hearing stage, I think before we get adequate answers.

The CHAIRMAN. On the response you said that the first phase response, the first was for Alyeska, and the second in line was for you, Exxon, and you responded immediately inferring that perhaps it was not a prompt or an immediate response by Alyeska. What is your position on that?

Mr. RAWL. Well, I am sure you have heard this before, but there a number of oil spill contingency plans that are involved in this situation. One of them was the Alyeska oil spill contingency plan which, by the way, had to be in place before the pipeline started up. It was in 1977 or 1976 that this plan was first in place. It has been revised several times since then.

Subsequently the shippers were separated from the pipeline plan, and had to have their own oil spill contingency plans. I think that was in early 1982.

When I said the first phase was Alyeska's responsibility—the spill envisioned for Alyeska in phase one is a relatively small spill. I think the numbers were mentioned this morning. It has always been recognized that a large tanker spill was possible in Prince William Sound, however nobody ever thought it was probable that a spill would be this large. There has been a rather modest write-up in the contingency plan for that, which recognized the possibility of a 200,000 barrel spill which is in the same ballpark as what we are talking about here.

There are certain times as to when you need to mobilize resources from other ports and around the world, and in our case we are bringing them from Europe, Florida and other places.

Now, an important part of the contingency's plan for a spill that large required approval by the federal agencies, the EPA, and the State of Alaska. The agencies involved recognized in the approval process that you had to promptly apply a dispersant—in this case Corexit 9527 would have been the proper dispersant—mobilization started on that.

On Friday a team left Houston, a management team, the president of the Exxon Shipping Company, the man mentioned earlier today, Mr. Iarossi, was sent with a number of associates.

We have response teams on the West Coast and the Gulf and East Coast, which include not only current employees but anyone that has been in our research effort in these activities in recent years and wants to do it. We put them under contract and we call them. All these people convened on Friday.

The management team was there later in the day on Friday. We had a C-130 available for spraying, and we had a lot of Corexit 9527 available. I think we had some delays that occurred, not because the plan did not provide how the decisions would be made, but because the plan provided for a number of people to be involved in the decision-making process.

The CHAIRMAN. Senator Stevens.

I have got a lot of other questions, but I want to yield to you.

Senator STEVENS. Thank you very much, Mr. Chairman. Mr. Rawl, I know what you say, you did not know this captain personally, and we certainly do not imply anything personal in our feelings. But, my problem dealing with this now is the problem of the multiplicity of plans.

It is my understanding that Alyeska did have a contingency plan. There is a Regional Response Team plan, there was a Prince William Sound company plan. Would you do us a favor of asking your people to give us a copy of each one of those since the beginning of the pipeline shipments out of Valdez? [1] I believe you have them; you will have to get them anyway for the lawsuit. I think this committee ought to have those, too.

Mr. RAWL. Do you want them for each member of the committee, or just send them to the counsel?

Senator STEVENS. Let me tell the committee that Bill Stevens is a friend of mine. In fact, I think distantly we are related. We talked about that one night.

He is the president of your tanker company. He came to Alaska and made a statement saying that Exxon would accept the total responsibility for this. You have made a similar statement here now. But after Mr. Stevens left Alaska, your legal department indicated that as far as the liability to the customers, in terms of failure of delivery, that Exxon was going to rely upon an act of God theory.

Is that correct?

Mr. RAWL. When Mr. Stevens made his statement, and by the way, Senator, as you probably know, he is the President of Exxon U.S.A., which is our principal operating affiliate in this country. He was talking about the impact of this spill in Alaska. When you start getting into something downstream of that, in terms of—and I assume you are talking about customers and items of that nature—then it can roll on around the world, and there is just no end to it.

Senator STEVENS. I just want you to know it was interpreted in Alaska as being a second thought of Exxon, and it left a significant doubt in the mind of Alaskans as to the extent that the Exxon major international company was going to accept the statement of liability that Mr. Stevens had made.

And many of us are lawyers, but your lawyers are liable to go to court and say, after all, that was not a legal obligation, it was a statement of policy, and we are now defending against these suits.

What is the policy of Exxon with regard to any expense that develops as a result of this spill?

Mr. RAWL. Well, obviously, I have said again here this morning, it is our intention to stay after this spill, clean it up to the best of scientific ability—or to the best that we can do. And also to pay those people in your state that have been damaged by this spill. And there are a variety of kinds of damages.

Now when you talk about suits, we have got suits, as I am sure you are aware of. A lot of you are lawyers, I am not a lawyer, but

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[1] The material was retained in the committee files

the fact is, there is a lot of these suits that are legitimate suits, and hopefully none of the people in Alaska who are damaged will have to go to court.

Senator STEVENS. I share that problem about the necessity for these people who live in towns—as a matter of fact, very few of them have real active courts.

Mr. RAWL. They will not have to go to court.

Senator STEVENS. And I am hopeful that the system will be put in place by the President for an emergency declaration. Because that would put the SBA and the Federal Emergency Management Agency and others out there to give temporary assistance which, if there are claims that can be presented that your company will pay, the people will get that assistance.

But, meanwhile, there are a lot of people, as in the earthquake, people that were not even in the area of the earthquake had severe financial losses as a result of it.

Now that is going on right now, not only in my State, but I think some of it is going down into Seattle. And we have to have some temporary assistance. That is not your problem.

But, I just want to make sure that from the point of view of the company, that act of God defense that was raised with regard to deliveries of the oil to customers, has no relationship to the events that took place in my State.

Mr. RAWL. None.

Senator STEVENS. Now I have a map here that I made when I was up there. I mean, I did not make the map but we drew these things on there that shows the four hatchery areas. That is the site of the Exxon Valdez on Bligh Reef.

It was my understanding that the obligation to have a pilot on board, basically came down to about this line, and that the third mate was qualified to handle the ship through Hinchinbrook Entrance, but he was not qualified to pilot this vessel above that line.

It is also my understanding that the captain was the only person aboard after the pilot got off. As the ship came through the Valdez Narrows, the captain was the only person on board that was qualified to run the ship.

Is that your understanding?

Mr. RAWL. My understanding is that the captain was the only man on board licensed as a pilot to run his ship. Now that is different from my view as to who was qualified or unqualified——

Senator STEVENS. It is my understanding that the third mate was not qualified to run that ship past Bligh Reef.

Mr. RAWL. Senator, frankly I just kind of lost the thread here. You know, frankly, I am having a little trouble even seeing the map, but I know where Bligh Reef is and so forth, and where the channel goes.

Senator STEVENS. Well, it's Bligh Reef like Captain Bligh. It is my understanding that as it came down the channel, the captain was required to get it past Bligh Island and Bligh Reef, and he did not do that.

Now we have just learned this morning, as a result of disclosures yesterday, that the computer on this vessel was programmed by the captain. As the pilot left and the tug left it, and that the third

officer attempted to countermand the computer program, and it was actually the computer that drove that vessel on the reef.

Is that your understanding?

Mr. RAWL. No, sir. It is not. My understanding, and this is a result of interviews made with the third officer, that he turned that computer off. And that it was not, at the time he hit the rocks, on automatic pilot. But, I am just telling you what he has said, what he has testified to.

Senator STEVENS. Again, I have taken too much time here this morning. But, it is my understanding from the visits in Cordova that the Cordova people who built those hatcheries, those are not federal, they were built by the people in the Cordova area to enhance the production of salmon in the area, that they felt compelled and did go and acquire the boom and started the protection of those hatcheries because the Exxon group would not move, in their opinion, quickly enough to start the protection.

Now, that is the basis, I think, of the feeling in the Prince William Sound now, that there should have been federalization. Have you talked to your people as to why some of the offers of assistance that were made were refused? For instance, the Inter-Departmental Team headed by the Bureau of Land Management, federal and state team, went to Valdez, stayed there two days, it was rejected. It is a crisis management team financed by the taxpayers. It did work out a contingency in Seward to protect Resurrection Bay and the national park down there.

Secondly, I am told that the Soviets came in and made an offer, the Norwegians made an offer, the Swedes made an offer. We have had a series of offers from responsible entities that have dealt with oil spills in the past, and your coordinator refused the assistance.

Now is that a company policy? And were you informed of that?

Mr. RAWL. First, that is not a company policy. Second, a lot of those things are alleged to have been said up there. It is my understanding, for example, that we are willing to accept the Russian offer.

Senator STEVENS. Is that ship going to be allowed in there to help now?

Mr. RAWL. I do not think we would have been able to keep it out anyway, but certainly we have asked to have it. We are accepting and have been trying to accept all the help we can get.

The Norwegian offer that had allegedly been made early in this spill was really—they wanted to have, as I understand, Senator, and the number of people may be wrong, four observers come and take a look. And that was approved, but there was no, from what I understand, offer of help. They wanted observers, they wanted to observe that happening.

There was a French offer of observers. I do not know the others ones.

Senator STEVENS. The Germans also contacted me.

Mr. RAWL. Now there is a question of offers of help, and then there is the question of a lot of people just wanting to see how you deal with a large oil spill. And obviously a lot is being learned up there.

And so it is a little bit different, the words are different and the intent is different, but we have not turned down any offers of help.

Now in terms of the fishermen out of Cordova, it is my understanding that we are utilizing a lot of these people with their boats, and that we are trying to fully employ them. Now you know better than most in this room, including me, that we are not dealing with beaches that look like Miami Beach up there.

These are very difficult conditions, and that is why it is such a pristine area and why the spill is so tragic and why it has all the wildlife it has. But we also have concerns. We are getting thousands of volunteers from our own people in the U.S. and around the world who want to come and help. And we are getting thousands of letters and telephone calls from people all over the country saying they want to go and help.

But, one of the only good things I can say about this thing is that so far no one was killed in this operation. Although I am sure there have been some minor injuries. As you know, Senator, you have a 15-foot tide in Prince William Sound, which is very unusual in the U.S. anyway. You have to go to your State to find anything like that except up in Maine. And I guess we may have a Senator from Maine here today, the Bay of Fundy has a tide something like that.

But, when that water goes in and out each day, or if you fall off the beach when the tide is going out, you better be a good swimmer, or somebody better be there with a boat. So we are talking about a very risky situation.

Exxon has been accused of being slow in cleaning up the beaches; under the conditions that exist it is going to be slow cleaning up the beaches. The beaches of France that were cleaned up were a pretty simple kind of clean up compared to what we are facing. But we are going to get it done.

Senator STEVENS. I am sorry you cannot see this, but let me tell you, an oceanographer that I referred to at the University of Alaska has been studying this for his lifetime. He told me that you have to view the Prince William Sound as being roughly capable of producing about 25 percent more fresh water annually than the Mississippi River; that it comes out of that area and it goes southwestward, what we call the Alaska Coastal Current.

And as the water exits Prince William Sound, it is basically fresh water. Most people think they are dealing with saline water. He has tried to make an input on these plans; he has tried to make an input on the plans now for the recovery from this spill. I gave his name to the people when I was there on Friday, I begged people on Saturday to talk to him. He sent me another contingency plan, just a report that I will be glad to make available to the committee today. The people who had knowledge of what was predictable were not consulted.

That has left a strong feeling with Alaskans, this man is to us the key man for this area. This Incident Team, one of the first things they did when they got over to Seward was to contact him for the plans dealing with the Kenai Fjords National Park and Resurrection Bay.

I think anybody that has looked at those plans will tell you they are absolutely perfect, they set the priorities, they said how much boom would be necessary in each area, they determined the areas that had the greatest sensitivity.

Incidentally, although they were a Federal area, their first area was an area that was the responsibility of the city of Seward. They said that was the number one salmon producing stream in the area and it had to be protected first.

They gave your people a list of boom they had to have. Your people, I have got to say, came forward and said, okay, we will pay for it, but we cannot move it.

And we had to scurry around and find people to move that boom to protect over there.

But what I am telling you is they were over there in Valdez; they were over there on Sunday and Monday and Tuesday.

Mr. RAWL. Just this past Sunday?

Senator STEVENS. This is the Inter-Departmental Team. They were sleeping in an abandoned warehouse, asking each day to be heard, and they were told they were not needed.

Now if you want to know why we feel so strongly that there should have been a Federal presence, that is it. Your people said we do not need you.

I was with the National Guard general, an Eskimo incidentally. We are very proud of him, the general, in his own right. He flew me down there. He offered his assistance. And in my presence they said, we do not need your help.

Now, Mr. Rawl, you have got a wonderful company, and it is the pride of our country, I think, that you have been able to do with that company internationally what you have done. But in this instance—in this instance, we feel you let us down. And I have got to say it. And I would say it to anybody.

The CHAIRMAN. Senator Gorton.

Senator GORTON. Senator Stevens asked you, Mr. Rawl, about what he considered to be a backing away from your agreement to assume responsibility, when you said you would treat as an act of God any claims by your customers. Your response to him was that, that did not limit your responsibility to Alaskans impacted by this spill.

Senator Stevens, quite properly, pointed out that there are people outside of Alaska who are impacted by this, and many of the fishermen who regularly fish in Prince William Sound are from the State of Washington or from the State of Oregon.

Was your answer to him another attempt to limit your liability only to people who are voting residents of Alaska, or does it extend to everyone whose livelihood is impacted by this spill?

Mr. RAWL. Senator, you can understand how sitting here—I presume you are a lawyer, I am not, but you have to hear the specifics of this. If, in fact, there is a fisherman in your home State who has been going up to Alaska during the summer and fishing and who has records to show that, presumably he would be damaged.

And I am sure he has access to counsel, because there are plenty of counsel around who have spent a lot of time looking at this.

I cannot accept, though, liability ad infinitum, and wherever it goes in the world. You know the rules of proof and so forth and whatever they mean have to be taken account of in this regard.

We are doing what we can do now. We have been very busy trying to get the ship off the rocks. It is now, thank God, in a cove

where hopefully we can patch it appropriately and we can get it to a drydock.

By the way, the Senator from Oregon is not here now, but he made a speech this morning about putting that ship in Oregon. And he said that was what Exxon wanted to do.

Exxon was asked the question: Where is there a drydock on the West Coast of the U.S. that can take a ship of that size? The answer was in Portland, Oregon. That got translated somewhat in the press I guess. There are other places in the Far East.

I am not saying where the ship is going, but the Governor of Oregon has already—we got word through the newspapers, a lot of people are communicating with us that way—I cannot say if that is what he actually said, because sometimes we get misquoted slightly ourselves, but he has indicated he questions whether he wants it in his state.

We have not made a decision yet as to where it will go. But, I just wanted to make the record clear on that. I have tried to answer your question, but it is very difficult for me. You are getting me into legal areas.

Senator GORTON. But you are not attempting right now to make a distinction and say that your only responsibility will be to affected residents of Alaska?

Mr. RAWL. Right. But when you start talking about customers I am sure——

Senator GORTON. I was not asking about customers.

Mr. RAWL. But that is the basis that Senator Stevens used and you referred to. That is an entirely different thing.

Senator GORTON. I take it that the parent Exxon Corporation sometime ago made a decision that it was wise corporate policy for it to own its own shipping line and to ship Alaskan oil in vessels owned by a company or by a subsidiary?

Mr. RAWL. Well, we also use many charted ships. I do not know how many we are using in Alaskan trade, but in international trade Exxon has 71 ships worldwide, roughly, I may be off a ship or two, 19 of them in this country. So we do use charted ships——

Senator GORTON. But, in any event, this ship is owned by a wholly owned subsidiary of the company of which you are CEO, is that correct?

Mr. RAWL. That is correct.

Senator GORTON. Can you give me the chain of command that would go from you, as chairman of the parent corporation, down through that subsidiary corporation, to this captain? Or maybe work it back up, who is the captain's supervisor, and who is his supervisor, and so on, up to you?

Mr. RAWL. Well, when it gets to the lower levels, I lose the track. But the captain has a supervisor. And then that supervisor and there may be another supervisor in between, reports to a manager on the West Coast of the U.S.

There are also other people who tell this captain what to do in terms of scheduling. As you know these captains work a few weeks on and a few weeks off. I am not precise on the time.

But then that individual on the West Coast. who is in Benicia, California in the San Francisco area, would report in to Houston where we have someone we might call an operations manager.

And then there is a president of the Exxon Shipping Company who reports to a senior vice president of Exxon U.S.A., who reports to the president of that company.

We have management committees at the level of Exxon U.S.A. We have management committees in New York, and then the president of that company would report to me.

Now I do not know how many levels that is.

Senator GORTON. Well, I want very earnestly to make a suggestion to you, Mr. Rawl. Whatever the success of Exxon in the past, it now has the dubious distinction of having caused one of the most severe and perhaps the most severe man-made disaster, environmental disaster in our history.

We are constantly comparing ourselves in this country, sometimes unfavorably, sometimes I may say unfairly, with the Japanese. But as I understand their corporate structure, you know, when something like this happens, everyone takes responsibility, from the individual who was directly in charge of it, up to the CEO. And everyone offers his resignation at that point so that a new team can take over and restore the credibility of the corporation.

I suggest the disaster that your company has caused calls for that kind of response. I would be perfectly happy to hear your comment on it, but that expresses my opinion on this disaster.

Mr. RAWL. I appreciate that expresses your opinion. I doubt if I have to comment on it except that a lot of the Japanese kill themselves also, and I refuse to do that.

Senator GORTON. I am not asking for that, but the resignations I think are in order.

Mr. RAWL. I do not think so.

The CHAIRMAN. Senator Kerry.

Senator KERRY. Thank you, Mr. Chairman.

Mr. Rawl, I think that notwithstanding everybody's anger and frustration and so forth, and there is not any real way to excuse what happened, but I do not think we gain a great deal by posturing up here at this point; and somehow doing other than to say that you have recognized, and I think most people in the country appreciated the forthrightness with which you have tried to at least accept responsibility and be involved in the clean up and accept the costs thereof.

There are obviously some questions though. I mean these things have a way of ameliorating as time goes on, and commitments can become dissipated and other things tend to get in the way, and lawyers and so forth will be clamoring from one end of the country to the other.

Let me try and see then if I can get a full understanding, because notwithstanding the press reports, I do not know how accurate and how extensive they are, as to what you see now, what have you declared as your full responsibility here, for instance: to what extent in the assessment reparation process to Federal and state agencies. Has a process been put in place now to assess the cost to the Federal Government, which you intend to reimburse? And what is the extent of that reimbursement?

Mr. RAWL. Well, I do not really know, Senator, what the extent of it is or what it will reimburse the Federal Government. Obvious-

ly we will have to look into that. That has not been our instant concern.

Senator KERRY. Well, let me give you an example. The National Ocean Policy Subcommittee has been thirsty to encourage NOAA to be able to do considerable more on global warming, on impact of ozone on ecosystems, and so forth.

Much of their resource is now going to have to be diverted to come in here, to find out what the impact of oil, which settles on the bottom is going to be on microorganisms and life systems and so forth.

Will it be your intention to redress that additional cost at a time when the Federal Government obviously is hardstrapped?

Mr. RAWL. I will look at everything. That is all I can say.

Senator KERRY. Well, you know, when you get these big advertisements in these newspaper which apologizes and says we are going to cover the full cost and make it good. I mean, to what extent have you thought that out? What does making good mean? How long will the fishermen continue to be compensated for the loss of livelihood?

Mr. RAWL. The first thing we have to find out is what is the size of this environmental disaster. There have been a number of environmental disasters around the world, some of them mentioned here, some others like the fire off of Mexico which spilled a lot more oil than this one in the Gulf of Mexico, that did not have lasting effects.

In terms of repaying the U.S. Government, a good part of the delay, from the time we were ready to spray detergent—which was part of the approved plan. It was a detergent that has been approved by the EPA, it was a detergent that is approved by the State of California, which is fairly tough on these kinds of things and 12 countries around the world. We had it available, we had aircraft, we were ready to spray, and it has been tested and it has been in this plan for a long time to use on this size spill—we could not get approval to use it on Saturday morning after we requested approval on Friday.

We could not get approval from Saturday morning until 6:45 p.m. on Sunday evening. And by then the weather had really gotten bad as I am sure you have heard, and blew the roof off the airport hanger and so forth.

Now we have got some government agencies involved in that.

Senator KERRY. What I hear you saying, as a lawyer, my ears are ringing with mitigation of damages arguments.

Mr. RAWL. I am not mitigating anything. I am just telling you that when you start pointing at who is at fault, we say the ship went aground, and we had a plan, and we were not able to start the plan.

Now as a lawyer that may be what you are hearing; what I am telling you, that in good conscience we are going to try to fix—but when you start talking about compensating the U.S. Government, everyone of us compensates the U.S. Government all the time. This company pays a lot of taxes every year. We paid a windfall profits tax for a number of years on Alaskan crude oil.

Senator KERRY. Well, I know you are not suggesting to us, because I think the Chairman would go through the roof, I mean I

know you are not suggesting to us that somehow compensates for what has happened.

Mr. RAWL. That is right. But I presume, however, that a lot of these are government services which are supposed to be provided when you have a disaster. I have a hunch, that had we had a little bit more clear authority, or we had people on the ground who felt that they could exercise the authority they had, we probably could have mitigated the damage to some extent. We would not have gotten rid of some of this damage, and we are going to clean the damage up.

Senator KERRY. Well, let me ask you this. In your judgment, was the Alyeska plan with which you are one of the consortia, was that adequate?

Mr. RAWL. Retrospectively it is difficult to say it was adequate. Retrospectively we are looking at all these plans.

Senator KERRY. Let me ask you point blank. Is it difficult to say it is adequate if the maximum amount of oil the plan contemplated being prepared for was 74,000 barrels, and this spill dumped three times that? Is that a difficult issue to decide was the plan adequate? It seems to me on its face

Mr. RAWL. You are talking about the Alyeska plan to begin with, which is a plan based on a certain amount of spill. The other plan was the shippers plan which comes into operation for larger spills.

But the early response was Alyeska's problem. And there was some difficulty. But I can tell, with 200,000 barrels of oil in the water, had they had the barge in shape and so forth, and there was a great deal of problem there obviously, it is doubtful that would have mitigated this problem completely is what I am saying.

Senator KERRY. Now with respect to company—well, let me ask a couple of more questions on that line.

In terms of the restitution for the fishermen, how long does Exxon plan to provide restitution to the fishermen?

Mr. RAWL. How long is the damage going to last? We will just have to see, Senator. You know you are talking about prospective things. I do not really know what the initial damage to the fishermen is going to be.

In a lot of places and some of them off of your home state, which I am sure you are aware of. The great forecasts of doom from oil spills did not result. Now Alaska is a different environment, a different time, a different kind of oil, but we will just have to see what the facts are.

Senator KERRY. What about in terms of the clean up of the wildlife natural resources? Have you put a mechanism in place for determining who is going to be paid, how, and over what period of time? Or are you currently putting that in place?

Mr. RAWL. On the wildlife?

Senator KERRY. Correct. The natural resource clean up.

Mr. RAWL. We are doing it. And we have contractors doing it. And we are going to do it.

Senator KERRY. For how long, for what period of time?

Mr. RAWL. Until no more can be done. Now what the damage will be and how long it will last I don't know, I think it was mentioned here today that sometimes you can overwork some of those environmental problems, which they did in France, removing the

sand from the beaches and so forth. But we are going to get it cleaned up.

Senator KERRY. And is that notwithstanding the cap, the $14 million, and the the subsequent 76, that is notwithstanding that?

Mr. RAWL. Those numbers are just numbers, obviously. It is $86 million by the way. The $14 million is like the $200 deductible you might have on your car insurance. We have to pay that under the TAPS operation. Then there is a $100 million, which I think Senator Stevens mentioned, that gets paid by TAPS. Which, by the way, we have paid roughly 20 percent of that $283 million fund ourselves by shipping down that pipeline, which we own 20 percent of.

Then we go to other cooperatives that we belong to worldwide, and there are a number of those. The insurance question is very complex. There are a number of other questions and so forth. So we just have to see how it all works out.

Senator KERRY. Have you personally spoken to Mr. Cousins to determine what took place?

Mr. RAWL. No, I have not.

Senator KERRY. Are you aware of what he says took place?

Mr. RAWL. Yes, I am.

Senator KERRY. What is——

Mr. RAWL. Now Cousins is the third mate.

Senator KERRY. That is correct.

What is Exxon's policy when the captain is incapacitated and no other licensed or authorized personnel are on board?

Mr. RAWL. I frankly do not know precisely what that policy is.

Senator KERRY. Is there a policy?

Mr. RAWL. I am sure there is.

Senator KERRY. But you are not aware of it?

Mr. RAWL. I have asked a lot of questions. I have not asked that one.

Senator KERRY. Did, to your knowledge, Mr. Cousins act in conformance with the company policy by assuming command of the ship under that situation?

Mr. RAWL. I do not know the policy, but I doubt it, but I really do not know the policy.

Senator KERRY. And notwithstanding that, you are currently representing him, your lawyers are representing him?

Mr. RAWL. We are representing him until—as I thought you said you are a lawyer—obviously everybody has a right to representation, and if he is not really at fault here. Temporarily we are representing him.

Senator KERRY. But you made no determination based upon this conversation with him as to what happened?

Mr. RAWL. I did not have a conversation. One of our lawyers had the conversation.

Senator KERRY. I understand. But, from what has been reported to you, you have made no determination as to whether or not he acted in conformance with company policy?

Mr. RAWL. I do not know.

Senator KERRY. Is the *Valdez* equipped to maintain communication with Exxon headquarters during transit?

Mr. RAWL. We do not. You are talking about Exxon headquarters, we are talking about an office in New York where I work.

Senator KERRY. No, I am talking about up in the area——

Mr. RAWL. They presumably have radio equipment that can communicate with various points where we have people who stay in touch with the ships. But I do not know precisely what radio equipment we have on board. But they have had no trouble communicating to my knowledge.

Senator KERRY. Are there situations in the past that you are aware of where an unlicensed person has taken control of one of your ships?

Mr. RAWL. Not that I am aware of.

Senator KERRY. Can you give us some idea of the impact of this reduction from the North Slope on crude oil supplies in the lower 48 states, in terms of gasoline prices and supply?

Mr. RAWL. Well, it has had some impact. And at times it has been substantial. And of course every time someone, possibly when the Governor of Alaska says we are going to shut down the pipeline or we are going to open the pipeline, the oil market reacts in a very volatile way these days.

The world oil market is very volatile also. Every time an OPEC minister clears his throat the market sometimes goes up and down. We have had a tight supply situation, relatively, in gasoline in this country since last year. Demand is up, as you know. And there have been some refinery turn arounds.

Now, there is more product moving to the West Coast. We have moved a lot from the Gulf to the West Coast, or we are trying to get it out there. But, the crude price went down yesterday, for West Texas Intermediate. That was probably predicated on the fact that the word was out that the ship was off the rock.

I do not know, Senator, how to express it. The supply situation is tight but manageable on the West Coast. I hope now that our ship is out of the way, we can relieve the anxiety, if we can operate those ships in and out with whatever kind of regulations transpire. And it is sort of a psychological thing when it comes to gasoline anyway, as I am sure you know.

People buy it when they do not even need it if they are concerned about running out of it.

Senator KERRY. Obviously you have heard the many who have said, you know, this was never supposed to happen, all guarantees were given and so forth, plans were in place and everything. But, once again, you know humans seemed to have found a way to defy the odds.

Is there a lesson that you would draw from this in terms of our future efforts with respect to oil exploration and delivery?

Mr. RAWL. In terms of oil exploration, I think we need to continue to do it in this country. I think it is very vital. As you know, I do not have to quote a lot figures, we are importing 40-plus percent of the oil we consume and we have a balance of payments problem.

If we do not explore for domestic oil we will have tankers coming to U.S. coasts with foreign rather than Alaskan oil.

Senator KERRY. What I am really getting at, Mr. Rawl, is when you look at all the circumstances now that in summary seem to be very disturbing, you have got a pilot who may have gotten off before the ship was at the point it should have been.

Mr. RAWL. I have not heard that before.

Senator KERRY. I am just saying allegation in the air.

You have got a ship that changed course, a third mate and so forth, a captain incapacitated. You have got a Coast Guard that did not have positive control. It had radar working and it seems as though, this is sort of like Murphy's Law, but it seems like there was a complacency in a very risky process where major guarantees had been given to citizens, not just in Alaska, who is most profoundly affected, but all over this country about this process.

And would you say it is fair to say there was a real complacency about—the plan for cleanup was not adequate? Even if the plan had worked according to the way it was supposed to work, it would not have done the job. It was not enough. The ship was far in excess, in terms of capacity for spill and so forth.

It seems like, I heard Sam Skinner say earlier, there is no magic solution. I do not think we are looking for a magic solution, I think we are looking for just basics that avoid a kind of negligence.

Mr. RAWL. I think you have used the word guarantee a number of times. I think it has been clearly stated all the time that there were no guarantees in these kinds of things.

Senator KERRY. I am not talking about a guarantee, I am talking about the elimination of, sort of, a fundamental risk level. It seems to me there was a complacency here.

Mr. RAWL. It is fair to say that when you get into large spills, you are not going to guarantee anything, but you are going to make every effort to avoid them.

It is like airplane crashes or whatever else happens, but that is what you can do.

Senator KERRY. So what you are saying is that there is a higher expectancy that you are going to get into a large spill.

Mr. RAWL. No, there is not a higher expectancy. This one should not have happened. I have said that. The equipment is state-of-the-art. This is not an old tramp steamer we are talking about, this is an $125 million-ship.

Senator KERRY. Well it is not state-of-the-art. I mean maybe when somebody is trying to turn the wheel and the computer system that is governing it, there should be an alarm bell that goes off that tells them immediately.

Mr. RAWL. We will have to find out what the facts are in that regard. The man says that he turned the automatic pilot off. But certainly if you turn the wheel, I presume if you are an experienced person, and he is experienced and has run ships on the oceans, then you can tell whether you are getting, and I used to have a boat, any response from whether the rudder and whether it is having some effect.

And if you have not punched the right button, you punch the right button, you do not just keep going and run into something.

Now why they got out of that channel I have no earthly knowledge of that, Senator, I just cannot tell you why. But we are going to make every effort to find it out, and we will just have to see.

Senator KERRY. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Rawl, he was an experienced third mate and, in radio contact, did he not get permission to take over from the master?

Mr. RAWL. I do not really know that, Senator. I just do not know how that works, frankly. I assume not because I have not heard that, but I really do not know that.

The CHAIRMAN. Do you know whether or not they do have radio contact?

Mr. RAWL. I do not know whether at that particular point in time. I know they had radio contact with the Coast Guard. And I know if he had said to the Coast Guard, I want to take over, or the captain wants me to take over, they would say you are not the licensed pilot. And so I presume he would not have asked. But I am just presuming, I really do not know.

The CHAIRMAN. Well, then that is a good answer, because the requirements for the master licensed, for a master pilot is very precise, very stringent. And the testimony has been crystal clear that there was only one licensed.

Mr. RAWL. Correct.

The CHAIRMAN. And I am certain that Exxon is not contending that you can countermand the license requirements.

Mr. RAWL. No. Absolutely not.

The CHAIRMAN. So when asked about the policy, you do not have to say you do not know, you do know the policy that you do not countermand.

Mr. RAWL. Okay.

The CHAIRMAN. Okay.

Mr. RAWL. But, of course, there could be a circumstance, as you said earlier, where someone has a heart attack or something, and somebody says, can I pilot the ship or whatever.

The CHAIRMAN. They still would not be licensed.

Mr. RAWL. No, but you cannot just tell them to let it run itself. Obviously if the captain just fell dead, I mean.

The CHAIRMAN. Well, that is the policy of Exxon right now, you do not have a policy for a co-pilot.

Mr. RAWL. No, but we have a circumstance that I mentioned earlier, that, it is my understanding the Coast Guard permits two officers to take over in those kind of circumstances. We have a number of officers that could have been on the bridge in that drop-dead circumstance.

But, you know, you are getting me into——

The CHAIRMAN. I am only getting you into what I know, and I am very inexperienced on the whole question. But, right to the point, if that master had had a heart attack, it was a policy of Exxon that the vessel should just run itself. Because you did not have anybody licensed to take over from him. That is your policy.

Mr. RAWL. But we had people that could run the ship. We had people that could take that——

The CHAIRMAN. Well, let us not equate run the ship with a licensed pilot. I mean we know this fellow could not run the ship, he is the one who ran it into the rocks.

Mr. RAWL. Well, as I understand it, and I have a lawyer over here who can tell me again if I am not stating it properly, that you could have two officers on the deck, along with the helmsman in addition, without the captain there, I guess, or without the licensed pilot.

But, you know, if you want to quiz me on the rules of the road of the Coast Guard, you have got the wrong witness. I will get somebody up here who can spend all day talking about such stuff. You will not find out a whole heck of a lot from me.

The CHAIRMAN. Well, we all know the rules of the road of the Coast Guard with respect to the license of someone who is a master, and you had one.

Mr. RAWL. Yes, sir.

The CHAIRMAN. And no more than one.

Mr. RAWL. On that ship at that time. And if it is appropriate, we will have more than one in the future.

The CHAIRMAN. If it is appropriate. When asked by Senator Kerry if you had learned anything——

Mr. RAWL. All right. I misused the word.

The CHAIRMAN [continuing]. Have you at least learned that, that it was not adequate and we ought to have a valuable ship of $125 million——

Mr. RAWL. Well, I am not sure, Senator, since this master has had it indicated that he was under the influence of alcohol sometime after this wreck. Had he, as a licensed pilot, been piloting the ship himself, it is very possible we would have the same circumstance. I do not know that. We are speculating what might have happened. But, a license does not necessarily make anybody effective, whether they are piloting an airplane or a ship or something.

You have brought up a good question which I have raised with our people, and we are chasing it.

The CHAIRMAN. It is not your contention that the vessel should have been controlled by Coast Guard radar at the time of the collision, when it collided with the rocks or went aground?

Mr. RAWL. My contention is, all I know about it is the weather was clear, there was ice out there, which they were trying to avoid——

The CHAIRMAN. I am not asking about the weather conditions, I am asking about the Coast Guard radar.

Mr. RAWL. I understand that. I am answering the question. It is pretty obvious that this should not have happened whether the Coast Guard had the radar on or did not, or controlled it or did not.

The CHAIRMAN. Excuse me. I am asking whether you think the Coast Guard should have had radar control under any circumstances?

Mr. RAWL. I think, obviously, we would be pleased if the Coast Guard had called early in the morning on the 24th and said take a right turn, get back in the channel, or something like that. I mean that would have saved us a heck of a lot of money and saved the government money too.

The CHAIRMAN. That is a hypothetical. What is the actual responsibility? Do you think it was the Coast Guard's responsibility to continue with radar coverage of that vessel?

Mr. RAWL. I cannot comment on that, Senator. I have not studied that. I do not know what their obligations are in that regard. In other ports——

The CHAIRMAN. Well, what is your reaction? I take it you think Exxon is performing adequately up there now in Valdez? Is that correct?

Mr. RAWL. I think we have done a very good job of getting the ship off the rocks and getting the oil out of it. And that was no mean feat, because when you have a ship floundering on a reef and you bring up other large ships, I think that has been good.

In terms of the clean up, it has been mentioned many times, the high tide, the very high tides complicate things. We are chasing the oil, we are doing what we can, and we are going to use all the resources available to us. But, some of this oil, as was talked about before, is moving fast. We are now starting to clean up islands that we are convinced have been passed by the oil and won't be messed up by the ebb and flow of the tide.

But I think we are doing a good job.

The CHAIRMAN. Then what is your reaction to the Governor of Alaska's suggestion that they take over, that the Coast Guard take over the project from Exxon?

Mr. RAWL. I think we will just have to look at that.

The CHAIRMAN. Well, I know we are both going to look at it, but what is your reaction?

Mr. RAWL. Well, if somebody has a real instant cure for this, I would be delighted. But the facts are, I have a hunch that we are going to keep on working up there and keep doing what I told Senator Stevens we are going to do.

Now some of the delay, as I mentioned early on in this thing, was because we had a lot of help in getting started.

The CHAIRMAN. Senator Stevens, we have Admiral Yost, the Commandant of the Guard, and he is ready to testify, and we have got two other important witnesses. Do you have any questions right now?

I wanted to thank Mr. Rawl for his appearance.

Senator STEVENS. Well, I understand while I was gone—just one thing. Mr. Rawl, when I was in Valdez, I asked about the dispersants, and I asked if there was an exercise last summer of the contingency plan, and I asked if this particular dispersant had been used and certified as a result of that run through of the contingency plan. And I was told it had not, that this dispersant that your company tried to use this time had never been approved before by the Coast Guard or by the fisheries people.

Did you know that?

Mr. RAWL. No, sir. I did not know that. I know that it is approved, that this dispersant has been part of that contingency plan in terms of understanding. It has been tested many times. It has been approved in California.

Senator STEVENS. I understand. But it had not been tested there and approved there for those waters with the fisheries conditions that were there, is what I was told.

Mr. RAWL. Well, let me tell you that this is not toxic. The toxicity is a magnitude less than the toxicity of crude oil, Senator. So the point is, that if they were concerned about toxicity rather than whether it performed well or not, then toxicity is not a problem.

If we were willing to spray and it did not perform well, in mitigating the spill, however, we tested it and it did mitigate the spill, but we should have been spraying earlier than that.

Since that would only have been more expense for us. We still do not understand the delay.

Senator STEVENS. Well, I was told it is only effective on fresh oil. That once the oil is not fresh that it will not disperse.

Mr. RAWL. Well, it is less effective when the oil is not fresh, but we were talking about pretty fresh oil. This oil was still spreading, a lot of it, originally on Saturday we had a four square mile, four miles by one mile basically, and then it grew as you know. And then when the wind came up Sunday night, it really got strung out down there.

We had an opportunity to mitigate that spill considerably. Of course, after that, a lot of it vaporized. Forty percent of the oil that went out has already vaporized and disappeared. But then we have the gunk that we are now trying to work with.

Senator STEVENS. Thank you.

The CHAIRMAN. Mr. Rawl, the committee appreciates your willingness to testify and your appearance here today. Thank you, sir.

Admiral Yost, the committee is indebted to you for two appearances, I guess over at the House side earlier, and now coming to us. We do appreciate it.

[The following information was subsequently received for the record:]

QUESTIONS OF THE CHAIRMAN AND THE ANSWERS

- Why did you leave Captain Hazelwood in command of the EXXON VALDEZ after his driver's license had been revoked and he had participated in your company alcohol rehabilitation program?

  We did not know that Captain Hazelwood's driver's license had been revoked. He had a valid Coast Guard license that was renewed in 1987. The practice under our former drug and alcohol policy was to return a rehabilitated employee to his position, with frequent monitoring of his behavior. Such action was not inconsistent with industry practice.

  With the benefit of the experience gained from the EXXON VALDEZ incident, we have taken steps to strengthen our drug and alcohol policy and its implementation. Specifically, employees who have had or are suspected of a substance abuse problem will not be allowed to work in certain high-risk positions. Unannounced random testing will be conducted when an employee is assigned to certain high-risk positions identified by management or fills a position where testing is required by law. This will include positions covered under recent DOT regulations which will become effective as of December, 1989; for example, ships' masters, mates, and engineers, interstate truck drivers, and pipeline operating personnel.

- Can you tell us why Captain Hazelwood was enrolled in the Company rehabilitation program? Was it due to a previous incident while in command, or did he voluntarily participate?

  Captain Hazelwood voluntarily enrolled in an alcohol rehabilitation program in 1985. Captain Hazelwood's enrollment in an alcohol rehabilitation program was not initiated by Exxon Shipping Company as a result of a previous incident while in command.

- Was there any followup to Captain Hazelwood by the Company after he completed the rehabilitation program?

  Yes. From the time Captain Hazelwood returned from rehabilitation, he was the most closely scrutinized individual in the company. The Fleet Operations Manager, who reports directly to the President of Exxon Shipping Company, and the Ship Group Coordinator, who was the direct supervisor for Captain Hazelwood, visited Captain Hazelwood on the average of twice a month when on duty during the first two years following rehabilitation. They watched Captain Hazelwood and made themselves available to other members of the crew so that, if there were any signs of regression that we could learn from other people, we would be attuned to it.

  After the first two years, Captain Hazelwood was transferred to the West Coast, and his supervisors there maintained surveillance by visiting his ship every time it was in port, visiting with him, and observing his behavoir. In addition, in each of the three years after rehabilitation there were meetings, the last being in March, 1988, of about five days each when other managers, as well as the President, had an opportunity to observe

Captain Hazelwood, observe how he interacted and to determine whether he was drinking alcoholic beverages. Following the March 1988 meeting the President, the Fleet Operations Manager, and the Human Resources Manager met for the sole purpose of comparing observations on what they had seen, what their impressions were and to confirm that Captain Hazelwood was not observed drinking. Clearly there was careful followup and monitoring of Captain Hazelwood following rehabilitation.

- o What is Exxon's policy when the Captain is incapacitated and no other licensed or authorized personnel are on board?

  It is not clear from the evidence presented to date that the Captain of the EXXON VALDEZ was incapacitated at the time of the accident. A number of individuals have made statements that he was not incapacitated. None, to our knowledge, has indicated he was incapacitated.

  The Chief Mate aboard the EXXON VALDEZ did hold a Master's license but did not have the pilotage endorsement required to command the bridge during the passage through Prince William Sound to Hinchinbrook. In the event the Captain was incapacitated or believed to be incapacitated, the Chief Mate would notify the Coast Guard and proceed as directed by the Coast Guard. The Ship Group Coordinator or Fleet Operations Manager would also be notified to provide relief personnel as required.

- o Did Mr. Cousins act in compliance with Company policy by assuming command of the ship in this situation? Did he violate federal regulations?

  Captain Hazelwood apparently left the bridge in command of an officer who was legally licensed as Second Mate by the U.S. Coast Guard but who did not possess the pilotage endorsement required to command the bridge during the passage through Prince William Sound to Hinchinbrook.

  Under federal regulations, the ship should not have proceeded without a person with a pilotage endorsement on the bridge. Mr. Cousins should have asked the Captain to remain on the bridge, and, failing that, notified the Chief Mate of the situation.

- o Is the EXXON VALDEZ equipped to maintain communications with Exxon Headquarters during its shipping operations?

  Yes, the EXXON VALDEZ is equipped with a number of ship-to-shore communications to enable the vessel to communicate with any shore location. These systems include Marisat voice and telex systems, single sideband radio, VHF Marine radio, HF Radio, cellular telephone. Sitor telex, and facsimile.

- o Did Mr. Cousins contact Exxon for advice or orders once Captain Hazelwood left the bridge?

  No.

- o Why didn't Mr. Cousins awaken either the Chief or Second Mate for advice or assistance?

  According to testimony at the National Transportation Safety Board hearing, Mr. Cousins chose to communicate with the Master, whom he knew to be awake.

- o If Mr. Cousins acted in contradiction with Company policy, has he been reprimanded or discharged by Exxon?

  Mr. Cousins has been relieved from duty pending completion of the Company's investigation of his actions.

- o Has an officer not properly licensed for the trip taken control of one of your ships in the past?

  Not to the knowledge of Exxon Shipping Company management.

- o On March 2, 1989, the EXXON HOUSTON was involved in an incident in Hawaii. What happened in that incident and what actions have you taken with regard to the crew in that incident?

  On March 2, 1989, the EXXON HOUSTON broke away from the single point mooring at Pacific Resources, Inc.'s refinery at Barbours Point, Hawaii, when the refinery's mooring chain parted. At the time the ship had transferred all but 90,000 barrels of its 493,000 barrels cargo of Alaskan crude. It immediately began maneuvering to clear the mooring. Shortly thereafter, the terminal's two cargo hoses which were connected to the tanker parted, releasing about 600 barrels of crude oil into the water. One of the hoses broke at a point which left about 800 feet of hose trailing alongside the tanker, hampering the maneuverability of the ship at a time when severe weather conditions pushed it toward the coastline. Before the hose could be freed from the ship, the vessel grounded. The vessel was floated about twenty-four hours later with the assistance of U.S. Navy and commercial tugs. During this period, about 200 barrels of bunker fuel oil entered the water. The conduct of the officers involved is still under investigation by the U.S. Coast Guard. The Company has completed its investigation and determined the officers and crew acted in compliance with all company procedures and policies.

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The CHAIRMAN. We have had Secretary Skinner and Captain Larrabee go into some detail. And if they have decided anything, it is that you are the man in charge.

STATEMENT OF ADM. PAUL A. YOST, COMMANDANT, U.S. COAST GUARD; ACCOMPANIED BY CAPT. KEN THOMPSON; AND CAPT. DAVE SPADE

Admiral YOST. Mr. Chairman, I think I would like to insert my statement in the record and to go immediately to the questions to save us both time, sir.

[The statement follows:]

STATEMENT OF ADM. PAUL A. YOST, JR., COMMANDANT, U.S. COAST GUARD

Thank you very much and good morning, Mr. Chairman.

Accompanying me today are the vice commandant, Vice Adm. Clyde Lusk; the chief of my programs division, Capt. Ken Thompson; and, the chief of my budget division, Capt. Dave Spade.

I am pleased to meet with you and the other distinguished members of this committee to discuss the grounding of the tanker *Exxon Valdez* and the resulting oil spill in Prince William Sound.

Mr. Chairman, last week, Secretary Skinner, EPA Director Reilly, and I spent 2 days in Alaska getting a first-hand look at the oil spill area and cleanup activity. Just before we left for Alaska, we met with the President to discuss this tragic situation and receive his instructions. Let me assure you that the President is deeply concerned about environmental issues and very interested in the Coast Guard's marine safety and environmental protection missions. When we returned, we reported back to the President on our findings, particularly Exxon's efforts to prevent further pollution, and to contain and cleanup what has already occurred.

We are getting excellent cooperation from all of the agencies and parties involved in trying to minimize the potentially devastating effects of the largest oil spill in this Nation's history. For the moment, I believe that Exxon, as a party with primary responsibility for cleanup, is making every effort to fulfill its responsibilities in that area. I am also satisfied that this country's national response organization is working well considering the severity of the spill and the remoteness of the area. There is also significant cooperation and effort from the State of Alaska and volunteers from environmental groups, fishermen, and the local public in general. The Federal on-scene coordinator for the cleanup operation is Coast Guard Comdr. Steve McCall, the captain of the Port of Valdez. He is being advised by leading marine environmental and pollution experts representing all of the agencies and parties involved. Exxon has assumed full responsibility for cleanup and their activities are being monitored by Commander McCall.

Mr. Chairman, this committee has a thorough understanding of the Coast Guard and about the Coast Guard's resource needs, and how vital our missions are to the Nation. You know that for 200 years the Coast Guard has proven, time after time, that its greatest strength is in its basic multi-mission expertise that gives it the flexibility to immediately respond to changing national priorities.

The response to the Alaskan oil spill is a case in point for our multi-mission nature.

The Coast Guard cutter *Rush*, a 378-foot high endurance cutter, is now serving as our afloat command center in Prince William Sound providing air traffic control and advisory coverage for the multitude of aircraft now in the Valdez area. Before being diverted to serve there, *Rush* was escorting a Japanese oil tanker, which she has just seized for fisheries support violations. The captain of the *Rush* placed a team on the Japanese vessel to accompany it to port and proceeded to Prince William Sound. This class of cutter is also an important asset in our drug interdiction efforts, and is our most capable military defense resource.

Let me also tell you about the Coast Guard cutter *Sedge*, a 40-year-old 180-foot oceangoing bouy tender homeported in Homer, Alaska, which is also on-scene assisting with the cleanup. In the past 3 months, *Sedge* had been underway 77 of 90 days in true milti-mission fashion, conducting military operations with the Air Force, responding to a potential oil spill at Kodiak, then a major search and rescue case nearby, before spending 6 weeks correcting aids to navigation discrepancies caused by severe winter storms. In fact, one aid she serviced, to ensure it was operating properly, was the buoy that marks Bligh Reef where the *Exxon Valdez* is aground.

Sedge has just returned to her homeport when she was dispatched for the Valdez cleanup, where she is deploying containment booms and skimmers, and serving as a logistics platform for smaller craft. A sister ship, the CGC *Ironwood,* is similarly involved in the area.

Coast Guard air assets are involved too. An HH–65, embarked on the cutter *Rush* for search and rescue, and fisheries law enforcement, is now flying support for the cleanup operation. Our HH–3 helicopters with the same missions and longer endurance are also flying support. HC–130's are flying in containment booms, boats, vehicles, and people. These are the same HC–130's that serve as long-range search and detection platforms for search and rescue and law enforcement.

Our people are multi-mission also. We took people doing staff work one day, had Coast Guard aircraft fly them hundreds of miles, and the next day put them to work in support of cleanup operations.

In all, we have 3 cutters, 5 boats, 6 aircraft and approximately 400 personnel involved in the Valdez cleanup operation.

I know that you, and other members of this committee, that you planned to closely review our marine environmental protection mission capabilities, during our authorization this hearing, long before the Alaskan oil spill occurred. I can also say the same for your colleagues on the other Senate and House committees with jurisdiction over the Coast Guard. The marine environmental mission has long been a major concern of Senator Lautenberg, my Senate Appropriations Subcommittee chairman, who has also visited the scene and observed the cleanup operation.

Mr. Chairman, the Coast Guard will continue to work closely with all concerned in monitoring the cleanup. We will continue to see that Federal laws and regulations are adhered to and that Federal responsibilities are met. And, in the post-accident analysis, all parties must cooperate to identify the lessons to be learned from this tragic spill. We must do everything reasonable to minimize future accidents like this anywhere in U.S. waters. We need to review the entire system to improve the safety of transporting hazardous cargo in our waterways. We must reexamine the plans, the people, and the equipment of both the regulators and the industry we regulate. I pledge the Coast Guard's full support and cooperation with this committee and other interested parties in meeting these objectives.

Mr. Chairman, I'll be pleased to respond to questions you and the members of the committee may have.

The CHAIRMAN. Very good, sir. Go right ahead. Well, if you want to answer questions, let me ask this. With respect to the licensing requirements of a master pilot of a vessel. As I understand, on the original license application—you do a background check on the original application. Is that correct?

Admiral YOST. The background checks for a person's original application for a license are somewhat more complete than the checks on a person's application for a license renewal. In the original application there is a requirement to report any drug use, any convictions of serious crimes and those kinds of things. On a renewal, it is less obvious, but there is still a requirement to report convictions in the last five years.

The CHAIRMAN. On those convictions in the last five years, it would have shown here in this particular case. At least, perhaps, we have learned that. I know the Coast Guard has been a leader on random drug testing and alcohol both and it has diminished its occurrence markedly and we have congratulated the Guard on that accomplishment.

Now, with respect to the licensees of the Guard, what do you think with respect to that, now, transmitting that particular requirement or policy to the licensees?

Admiral YOST. The system is basically, the licensee must report convictions—other than for minor traffic violations—in his application. In this case, the master did not report in his application the convictions he had for driving while under the influence during the previous five years. That was absent from his application.

We have 25,000 applications a year that we process. It is impossible, with the current level of computerization and manning, to do a background check on every application. If there is abuse on the vessel, the master is responsible for reporting that abuse to the Coast Guard. We would then proceed against the license of the officer involved.

In this case, the master himself was abusing alcohol and nobody reported it.

The CHAIRMAN. Is there a back-up requirement if the master himself is the one under the influence?

Admiral YOST. Yes, there is. The chief mate and the chief engineer have a responsibility to take over the operation of the ship, if they feel the master is incapacitated.

The CHAIRMAN. But they were asleep?

Admiral YOST. They may have been asleep at the time of the grounding, but I doubt if they were asleep at the time the vessel left the dock. Now, whether or not they knew of the condition of the master will be determined by the board of investigation.

The CHAIRMAN. So it did go down to the third mate, and he was not licensed.

Admiral YOST. Well, the third mate did not have a first-class pilotage license for that particular area. That area, from Hinchinbrook on in, requires a first-class pilotage license. That requirement can be met by a ship's officer up to Rocky Point, where the normal state pilot gets aboard. That vessel was in an area that required pilotage by a ship's officer having a pilotage license for that area. The master was the only one on board that had that pilotage. The third mate was qualified to operate the vessel, but did not have pilotage for that area. He should not have been on the bridge by himself. That is very clear.

The CHAIRMAN. On this particular point, would you recommend or have considered a co-pilot being required, or was this an aberration here on this particular vessel, and do they regularly have at least two licensed pilots? It seems like, when these things put to sea—and that's a long voyage in bad weather—I have heard of good pilots getting seasick as a dog and they would as soon die as give up the vessel and everything else. What about a co-pilot, or what is the policy, if any?

Admiral YOST. Well, we ought to perhaps and will examine, whether more than one officer on a ship ought to have first-class pilotage for that particular area of Prince Port William Sound. I understand that a state pilot and a federal pilot is required in the Narrows. Now, I would assume that means that in the Narrows, as you go on up, you have got to have a state pilot, somebody with state pilotage license, as well as an officer on the vessel with the pilotage.

The CHAIRMAN. But beyond, where the collision occurred, there is only the requirement as far as the Coast Guard is concerned—you could not have gone out there—let us assume there was not an accident that particular evening, and you found just the captain aboard and let us forget about the alcohol. You would not have arrested the captain or charged him with anything because he was the only one licensed, would you? Or would you?

Admiral YOST. No, but we would have charged him if he were the only one licensed and he was not on the bridge. He would have been in serious trouble. His license would have been in jeopardy at that point. The question is, should we require two officers with pilotage from Hinchinbrook on in? That is a question we ought to look at.

The CHAIRMAN. And that is—super tankers. Well, let me go to that question. On the double hulled vessel is that we require for chemicals and the natural gas vessels, that are required for safety, it has been attested that that would not have saved this particular oil spill. Am I right or wrong on that?

Admiral YOST. Well, we do not know for sure. We will have to see what the extent of the damage was. It is probable that the damage was deep enough in that vessel, up through the bottom, that double bottoms would not have helped. That is very probable. We will not know until we get her in dry dock.

The CHAIRMAN. Then the question is, whether we go back to smaller tankers rather than the 240,000 barrels, go back to the 74,000 barrel type tankers that we used to have, because we just cannot afford this kind of catastrophe hereafter.

I mean the environment, the fisheries are such a precious resource that on the safety side—it is sort of like out on the highway. We will not allow—I know my trucker friends like to have tandem trucks and some of them would like to have three tandems, but you cannot get by them. You cannot pass them. So as a policy matter we say, you cannot have three tandems, let us say.

Maybe as a policy matter, this super tanker has shown us, as they are trying to attest, that Alyeska could not have had sufficient equipment to have arrested, or stayed, the spill in any real marked degree. It still would have continued to have spilled. I thought if they had got up there promptly maybe they could have prevented it but I am confused in my mind. What is your comment with respect to both? Namely, a smaller tanker on the one hand and Alyeska's capacity and responsibility, both?

Admiral YOST. Last year we had about 2,000 tanker passages in that strait. Those are with, let us say, 240,000 barrel tankers. Let us go to a smaller tanker, half that size. If we had half that size tankers, instead of 2,000 passages we are going to have 4,000 passages. I do not know what the trade-off is between the greater risk of twice the number of passages and the lesser risk of only having half the oil aboard in case you do get in trouble. There is a trade-off there and it will have to be looked at again.

Now, as far as the response, let me say this. The Alyeska plan provided for a five-hour response. That was not met. It is my view that in any spill, the sooner you get there and get the boom around the spill, the better off you are.

I would have been delighted had Exxon had that spill boomed in five hours. They did not. They did not get the boom there until 10 or 12 hours after the spill occurred. It took a while to boom it, and shortly thereafter a 70 knot wind came up and blew everything—boom and everything else—away.

So I would have been much more pleased with a better response. Whether it would have made a great deal of difference is problematical. I can discuss the dispersion in the same general way.

The CHAIRMAN. Let me yield to Senator Stevens. He has got to leave.

Senator STEVENS. Well, Mr. Chairman, I do. There is a historical meeting going on in the Senate and I am part of it and I have just been called.

I really wanted to speak to the Coast Guard about establishing a vessel control system in this area like we have in the Puget Sound. This is 25 percent of the Nation's oil moving through that passage and I have the correspondence—I complained to Admiral Gracey when they changed the radar—and shortened the capability of that radar.

I think this now requires that we take firm action to assure that this area will be controlled, as you have a control system at Puget Sound. I have some other questions, but Mr. Chairman, I have got to go make that speech.

The CHAIRMAN. I am supposed to be over there too, but this is far more urgent right now.

Senator STEVENS. It is and you embarrass me but the President pro tem says I am to make a speech. Are you to make a speech?

The CHAIRMAN. That might be the best speech you ever made, if you stay here. You and I, you know—Senator Murkowski has been very understanding of the Committee policy, because it really raises an issue with other senators and I have assured him that I can ask the questions. Right to the point, Admiral, what is your reaction to the Governor of Alaska's request that the Coast Guard take over the project up there from Exxon?

Admiral YOST. The Governor and I are not very far apart on this. We do not want to federalize this spill. We do not want to take the responsibility for funding this spill. It is costing about $1 million a day.

We have got about $3 or $4 million left in the 311(k) fund. I do not know what I would do on the fourth day if we federalized it. The Governor has not asked for that. What he has suggested is that there be more control by the Coast Guard—more direction, more guidance—and I am pretty much in consonance with that. That has started. We are involved in a discussion with Exxon about the Coast Guard stepping into more of a direction and guidance role for the clean-up.

We are organized for that. We are a pyramid organization, a military organization. Exxon is a business. We are ready to do an operational thing. They are having a little trouble doing it. That means we need to step further into it, without federalizing it, without removing liability, without us funding it, but with more guidance and direction. We are doing that.

The CHAIRMAN. Well, I am reading from Governor Cowper's letter: due to its unique formal responsibilities and familiarity with the Alaska coastline we believe the Coast Guard is uniquely suited to coordinate the response. That's not whether you get further or you do not get further. That is really whether you coordinate the response, as the Governor of Alaska is requesting. Do you agree with that?

Admiral YOST. I am in consonance with that, yes. We are going to do much more coordination and guidance than we have up until now, but we do not want to federalize it, not yet.

The CHAIRMAN. I am trying to find out the difference in my mind between federalizing it and you taking over prime responsibility for coordination. What is the difference?

Admiral YOST. Federalizing means that we take over all the control and the direction. We take over the contracting and we give rudder orders to everybody up there. That means I need about 30 contracting officers up there to contract with every fishing boat, every fisherman, every company, and everybody who is working for us.

To coordinate it means that we allow Exxon to continue to fund it, to keep their checkbook open, to do the contracting with the clean-up people, and we basically direct and guide Exxon in where we want the clean-up, where we want the skimmers, where we want the boom, how much boom-tending, where we want the beach cleaners—that kind of thing—and we will perhaps bring in some other Federal forces at the same time.

The CHAIRMAN. What do you mean by yet? When you get the other Federal forces in?

Admiral YOST. When would I propose to do this? We are doing it as we sit here. We are transferring that guidance and direction more to the Coast Guard and discussing that with Exxon. I am not privy to what has happened since this morning.

The CHAIRMAN. So the Coast Guard is responding affirmatively to the Governor's request as you see it?

Admiral YOST. Yes. We were doing it at the time he requested it. All along, we had been talking to the Governor all along and with Exxon about doing this. We are talking to Mr. Iarossi this morning about moving people into their operations center and taking over some of the operational guidance.

The CHAIRMAN. No emergency legislation is necessary?

Admiral YOST. No, sir. At least, if it were, I think the President would have requested it. As you know, I was in the Oval Office with the President and Mr. Skinner and Mr. Reilly and others yesterday, discussing some of these same matters with the Alaska delegation.

The CHAIRMAN. With respect to radar guidance, it is not the Coast Guard's position, policy or responsibility that that ship at the time of the collision be under radar guidance, is it?

Admiral YOST. No. We do not do radar control, in the way that FAA does aircraft control, in any waters, any place. We provide an advisory service. We tell the vessel what vessels they are liable to meet and advise them of other things that complicate their passage.

Now, in Valdez, we do more than we do any place else. We forbid traffic, except one-way traffic, through the Narrows, and we track each vessel in the Narrows. We plot the vessel's position every three minutes while it is inside the Narrows. Once it gets out of the Narrows, just short of Rocky Point, we quit plotting it. At that point it is at sea. The vessel discharges the state pilot, and goes out to sea under the pilotage of the officer aboard.

The CHAIRMAN. Is your effort stultified, or arrested, or restricted in any way by budgetary constraints?

Admiral YOST. No, I do not think it was. But I think it is only fair for me——

The CHAIRMAN. How about it? I mean, in the future here? You know, you have got a sympathetic Committee that is proud of you and the Guard and I do not want to hear—in fact, I have got a suspicion now, one said they only had $3 million in the fund over there at the DOT.

It seems like there could have been a hesitancy because there was only $3 million there and they did not want to assume the responsibility for $100 to $200 million project with only $3 million sitting in the fund.

Admiral YOST. Well, that is very true. That fund has never been much more than $20 million. It is now at $3 million. I would be more comfortable with it at $10 or $12 million. We may take a look at that and ask our Committees to take a look at it.

But as for as the operation of the vessel traffic service, the only effect on that—and I do not think it is a serious one, we are looking at it—was in the 1988 budget cut that the Coast Guard took. We removed seven people from the Valdez vessel traffic service and reduced the number of people on watch from two to one.

Now, it was our view in taking that budget cut, of initially $103 million, that we would take it from areas that were least critical. Our feeling at that time was that we could remove a watch stander from Valdez. We did that. Now, if I were to make the decision this morning, it would probably be different. I do not think it had an effect in this accident.

The CHAIRMAN. Is there anything you need from the Congress?

Admiral YOST. I am sorry, sir?

The CHAIRMAN. Is there anything you need from the Congress?

Admiral YOST. Well, no. The President's budget is coming up here. It is an austere budget. It is one I said I could live with. It is one I said that will not result in closing any Coast Guard units. But, in 1988 I closed two vessel traffic services, one in New York Harbor.

I am glad this spill was not in New York Harbor, because I would be asked why did you close the vessel traffic system in New York Harbor? I closed two, one in New York Harbor and one in New Orleans, the two biggest ports in the United States, because of a budget cut. So when you ask me, what do I need, I need the President's budget, but the President's budget does not envision reopening those two vessel traffic services. I have not asked for them. I did reduce Valdez.

The CHAIRMAN. What did the Committee, or Congress learn—let us assume you are at the Coast Guard Academy several years hence and two weeks have passed and on reflection, what should we have learned with respect to this particular collision, or disaster?

Admiral YOST. Well, let me talk, first broadly, in terms of the support the Coast Guard gets from Congress. We have always had trouble getting a reasonable budget within this government, and that includes the United States Congress. We come up here, year after year, with a budget that is austere, and we normally leave this area with a budget less than our austere budget.

So I think that every time we close a Coast Guard Station, we close a lifeboat station, we close a vessel traffic service, we, as the American people, assume more risk, for accidents in those places.

Now, I do not believe this accident is the result of having closed something, but you asked what the Congress can do. I think the Congress ought to support the Coast Guard in the appropriations area. This authorization Committee has been wonderful to us, sir. I am talking about the appropriations area. Congress needs to support the Coast Guard at a higher level than they normally do.

The CHAIRMAN. What have we learned environmentally and in the maritime sense about this particular incident? Is there anything? For one thing, I am not expert enough to ask the questions that Senator Stevens was getting at, but it seems like a harbor pilot was required further, up to the point, even of this rock. But somehow that was cut back, that requirement.

Admiral YOST. That was several years ago. We had pilotage—from Hinchinbrook on in required a state pilot. The only vessels that required the state pilots for that area were foreign vessels. We had an injury of a pilot trying to get aboard in that extremely rough weather off Hinchinbrook, so that requirement was eliminated. But there were only nine foreign vessels in the system.

I think what we should have learned and what we have learned—and there will be more lessons coming out of the investigation—is that in this day and age we have got to tighten up the application requirements and the background checks of people coming in for licenses.

We have got to have a better feel for a man who comes in and falsifies, if that is the case here, an application by not reporting on convictions for drunk driving. People could come in and falsify answers to drug abuse questions that are asked in the application. I think they will. I do not think people will admit drug abuse on an application for a license. I think they will avoid writing down DWI convictions on license applications. We need to somehow get behind that application and see what is happening with these people.

The CHAIRMAN. But no one in the audience would want to fly home this afternoon in a commercial flight that had only one pilot. They would not want to get on that plane. I mean, we are not talking about people just getting drunk. I mean, just normal things can occur, too, in individual heart attacks and otherwise and they have.

With a vessel as long as three football fields, $125 million and a million gallons of fuel aboard and everything else, it seems rather puny and nonsensical to just have one master licensed aboard ship to take it to sea, I guess in some instances here—in many instances—these super tankers go all the way to Saudi Arabia and come back, the Persian Gulf. They are out on the high seas. I just cannot understand that.

Admiral YOST. Let me comment on that. Every vessel of that size does not have a pilot and a co-pilot as an aircraft would have. It has a pilot, a master, chief mate, second mate, a third mate. So it has at least four officers that are completely qualified to run that vessel.

What it might not have is more than one officer that has the required pilotage for the particular area that they are coming into, whether it is New York Harbor, or Amsterdam, or Prince William Sound.

Now, to require that two people on the vessel have pilotage for each area they come into would be an added requirement. I do not

object to that. We should look at it. But, do not think that they do not have somebody who is qualified to run that ship from the bridge. They have got four people.

For that third mate (who is a qualified officer and has passed the examinations, and who has had a lot of trips into Valdez) to have run that ship up on the beach, something awful had to have happened on that bridge. Some kind of a loss of continuity, a loss of something that we do not know yet.

But there is no reason that that third mate was not competent to run that ship where he was, in the area he was in. He had the basic competency. He did not have the license. The master should have been on the bridge. Those are faults. But we did not have a bumbling idiot on the bridge. We had a guy who was well-licensed and trained.

The CHAIRMAN. And he should have been over—able to see the channel markets.

Admiral YOST. Yes, I think he almost ran over the buoy to get on the rock.

The CHAIRMAN. I think from what you said there was a ten-mile wide channel, and my boy Michael could have run the boat through there.

Admiral YOST. That played a lot better outside the Beltway than inside the Beltway, so I am trying to get rid of that comment.

The CHAIRMAN. Have you notified, if you remember the Governor of Alaska cited that there—the Code of Federal Regulations, Section 300. Are you ready to notify the Governor now that you will take over immediately the coordination of the project up there from Alyeska?

Admiral YOST. The governor has asked that the disaster have a federal input outside of the Clean Water Act, and that is not my responsibility. He has asked about what Senator Stevens was talking about, to open up the Small Business Administration funds and some other association funds to that.

The Senator says no. I may be wrong. He has not asked tc federalize this bill. What he has asked is for the Coast Guard to take more of a directive action in this spill, and I am in consonance with him. We are talking about that right now, with Exxon, on the scene in Alaska. If it is necessary, I will go up there myself and set that up the way it should be.

The CHAIRMAN. Well, I think the Governor has been more specific. He refers to that section of 40 Code of Federal Regulations Section 300, and that gives a specific authority and responsibility for coordination.

Admiral YOST. Is that the Clean Water Act you are talking about?

The CHAIRMAN. Yes.

Admiral YOST. The Governor has asked for that. We backed away from it. I mean, it is not my understanding that he has asked for it again. This morning he has asked for——

The CHAIRMAN. Well, we had a letter. We will furnish you a copy of the letter. He has asked for it again.

Admiral YOST. What is the date on it, sir?

The CHAIRMAN. April 5th. I got it at 8:00 last night.

Admiral YOST. You have better mail service than I have within D.C.

The CHAIRMAN. Well, we will get this letter to you.

When you say the law, you know, for Alaska oil can only move in U.S. flag vessels. Do I understand, Admiral, you say that non-foreign vessels have gone to Valdez to load oil over a period of time?

Admiral YOST. Yes. There are foreign vessels in the trade. All of them terminate at St. Croix. St. Croix has a U.S. refinery, but is not U.S. territory.

Now, let me again say I am not prepared to federalize this spill in the legal sense of the word because it would open up to me the responsibility to fund it from the 311(k) fund. I have only $2 or $3 million in that fund, and the clean-up is costing $1 million a day.

I want to do something short of federalization. We will assume the responsibility for on-scene guidance and direction to Exxon in doing this. Basically, we will exercise a lot more control than we have now. However we want to stop short of federalization. Legally, that might require Exxon to close its checkbook to the fishermen and everybody else. I do not want to do that, and I do not think the Governor does either. I did not know he said federalization. He talked about control. I would have to have a copy of the letter.

The CHAIRMAN. Well, you will have a chance to clarify and coordinate with him. Is there anything you wish to add to your testimony here this morning? We do appreciate your coming over.

Admiral YOST. No. I want to say just one other thing, though, that I do not feel that I am at odds with Mr. Rawl. I am concerned that he is placing too much emphasis on the timing of the dispersants and too much emphasis on what could have happened had dispersants been put in the water.

The federal on-scene coordinator and the state people made, in my opinion, the right decision, which was not to let dispersants go in the water unless they were going to be effective. In their view dispersants would not have been effective because there was not enough wave action to mix them, and there were not enough dispersants on hand at that point. We had ten million gallons of oil in the water and they had a few thousand gallons of dispersants. It was a drop in the bucket. It would not have made a difference. They made the right decision.

And then when the wind did come up, it blew everything away and there was not any chance for dispersants.

The CHAIRMAN. What about Alyeska's readiness? I understand their barge to carry out the booms had punctures in it.

Admiral YOST. I am very disappointed that they were not able to execute their plan. Now, that is not a federal plan. It is not a Coast Guard plan. It is a plan pursuant to a requirement by the State of Alaska before they would permit Alyeska to come in there. The plan was arrived at by those two parties. It was a plan they should have been able to execute. They were not.

I think that any time you are late at a spill, you are in major trouble. Every hour you are late multiplies the problem. They should have been there within five hours. They were not.

The CHAIRMAN. Very good, Admiral Yost. We appreciate it very much, your appearance here today before the committee.

And now, finally, we have a panel, and the record will stay open for further questions by my colleagues.

We have a panel of Dr. Evans, the Under Secretary of Commerce for Oceans and Atmosphere, and Mr. Steve Robinson, the Deputy Director of the Fish and Wildlife Service, and I will ask them to come forward.

Mr. Evans, and Mr. Robinson, we do appreciate your indulgence, and we apologize, but you can see we have tried to move along as quickly as possible.

Your statements both will be included in the record in their entirety, and you can highlight it or give them.

You have been indulgent with the committee, and we will be indulgent with you. You can give the statement in full or highlight it.

STATEMENT OF WILLIAM E. EVANS, UNDER SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE, ACCOMPANIED BY CHARLES N. EHLER, DIRECTOR, OFFICE OF OCEANOGRAPHY AND MARINE ASSESSMENT; AND THOMAS A. CAMPBELL, DEPUTY GENERAL COUNSEL

Dr. EVANS. Thank you, Mr. Chairman.

Because of the seriousness of what we are discussing here, I have brought Dr. Ehler, who is the head of our group that deals with hazardous material, and his team is the team that has been working on this oil spill from about 11 hours after it actually happened.

I also have legal counsel with, Mr. Campbell, who is here since I am not a lawyer. I know a lot of people were saying they are not lawyers and using that as an excuse. I brought a lawyer with me.

What I would like to do, Mr. Chairman, is to go through a lot of the testimony and read it because I think it is important.

Mr. Chairman and Members of the Committee, early in the morning of March 24, 1989, the tanker *Exxon Valdez*, carrying approximately 60 million gallons of North Slope crude oil from the Valdez Terminal of the Trans-Alaska Pipeline, ran aground on Bligh Reef shortly after entering Prince William Sound. It spilled an estimated 11 million gallons into the sound.

By April 2nd the oil from this spill had spread throughout an area of more than 800 square miles, approximately one third of the total surface of Prince William Sound. Prevailing currents and winds are moving oil in a southwesterly direction through Montague Straits toward the open waters of the Gulf of Alaska. The rocky shores of Naked, Knight, Smith and Green Islands have been very heavily oiled.

The oil is expected to follow the coastline of the Kenai Peninsula where it could impact biologically productive and scenic areas such as Bligh Sound, Resurrection Bay and the Kenai Fjords National Park.

Prince William Sound, located on the south-central part of the Alaskan coast, is a remote, pristine fjord/estuary-type ecosystem containing important natural resources. At least five species of

threatened or endangered marine mammals frequent the area during some time of the year. It is one of the largest, undeveloped marine ecosystems in the United States, inhabited only by about 6,000 people in scattered towns, villages, and hamlets.

The economy of the area that we are talking about is based upon natural resources and includes commercial fishing which we have heard a great deal about. Prince William Sound supports major commercial fishing for salmon, herring as well as smaller fish used for king crab, shrimp, hallibut. These commercial fisheries are renewable resources that each year are worth over $100 million to that community.

Recreation. The relative accessibility of Prince William Sound to Anchorage, a major population center of Alaska, makes it a favorite of local and visiting recreationists who use it either individually in organized tours for fishing, sightseeing, kayacking and camping. There are also a number of cruise ships that come into the area, and we do not even have the idea of what the economic impact is going to be on that.

There is subsistent fishing and hunting, logging, oil transportation. Port Valdez is located in the northeastern portion of Prince William Sound is the southern terminus, as we know, of the trans-Alaskan pipeline.

Perhaps most devastating with this event was the timing of the spill. As the harsh Alaskan winter turned into spring, the irreplaceable resources of Prince William Sound are the most in jeopardy since this is the time when we have a lot of larval fish. A lot of fish are coming in for purposes of spawning and this is the most vulnerable time for them.

For example, migrating herring are finally in the sound and would be available for harvest. The spill occurred just days before the scheduled opening of this fishery which had to be cancelled. This means that not only lost jobs and income, but also lost export value to the United States.

But more valuable even than the herring is the salmon fishery. All five species of salmon are supported by Prince William Sound in this river system. Adult fish will be affected when they return to the sound this spring and summer. The juvenile salmon are now ready to enter the estuaries as they have been damaged by the spill, and will begin feeding on resources that have already been damaged.

This is the time of their life cycle that they are most dependent on the marine environment impacted by the spill, and there is a good chance that many of these fish will not survive. The effects will be felt years down the road when these fish are not available as adults for spawning, and the loss will likely ripple far into the future.

The effects on these natural resources and their human uses form the basis for the damage assessment work that will be undertaken by the co-trustees. In this case NOAA acts on behalf of the Secretary of Commerce as a federal trustee for natural resource and coastal and marine areas.

The Secretary of the Interior, the Secretary of Agriculture and since this incident occurred in state waters, the State of Alaska also have significant trustee interest and NOAA's damage assess-

ment authority is derived from the Comprehensive Environmental Response Compensation and liability Act of the Clean Water Act as well as other resource management statutes which provide the legal procedural framework for claims against potentially responsible parties for losses resulting from injury to the natural resources caused by oil spills.

Based on these legal authorities, NOAA has four principal responsibilities during and after an oil spill as the scientific support coordinator to the U.S. Coast Guard board on-scene coordinator, NOAA provides liaison between resource, chemical, medical, and other scientific experts and the on-scene coordinator, Models, trajectories of spilled oil to predict its future movements, assesses the nature, behavior and fate of the oil pollutants, for example, chemical sampling and analysis, identification of toxic properties and alteration of physical and chemical characteristics under various environmental conditions, advises on safety precautions for response personnel, identifies areas of biological importance requiring protection, and helps the on-scene coordinator respond to inquiries from local, state, and federal agencies for assistance in scientific studies and environmental assessments and assists the on-scene coordinator's public relations efforts on scientific issues.

As a member of the regional response team, NOAA assists in the preparation of federal recommendations to the on-scene coordinator.

As a federal trustee for living marine resources NOAA is responsible for identifying injuries to resources, assessing losses associated with injury to the natural resources and bringing claims against the responsible parties.

As the nation's principal marine pollution research and monitoring agency, NOAA examines the long-term ecological consequences. Currently we have 25 experts on site at the *Exxon Valdez* spill including people from NOAA's hazardous materials response team, the National Marine Mammal Laboratory, the National Marine Fisheries Service, Auke Bay Laboratory, the Office of Aircraft Operations, University of Alaska Sea Grant Program, and the National Weather Service.

NOAA's hazardous materials response experts have conducted extensive overflights of the spreading oil and coastal reaches of Prince William Sound to monitor the slick movement and to identify the threatened areas. In fact, the NOAA hazardous materials response team probably has more collective experience in marine oil spills than probably any other group in the world that have occurred in the last 13 years. They have been involved in almost all of those, about 15 years experience, and they have been involved in working on about 2,000 oil spills including the *Argo Merchant* and the *Amoco Cadiz* and the IXTOC blowout.

NOAA trajectory models are an important tool in spill response. These computerized forecasts are updated continuously to project direction of oil movement in order to deploy effectively cleanup equipment and containment booms. Special analysis and forecasts of wind and weather conditions are being prepared to support on-scene operations. We have installed automated weather stations, provided by the Department of the Interior, on several islands in

the path of the spreading oil to obtain accurate wind data for trajectory analysis.

NOAA scientists have been taking water and biological samples ahead of the spill to establish benchmarks. We are also, of course, sampling the impacted areas. Our biologists are closely following the impacts on fish stocks, birds, marine mammals, and the extensive critical habitats that comprise Prince William Sound.

Unfortunately, the impacts, even at this early stage, are substantial and we believe will grow worse. The ecology of Prince William Sound is especially vulnerable to an oil spill of the magnitude of the *Exxon Valdez.* The innumerable rocky inlets and coves are traps where the weathering crude oil is collecting and being deposited on the beach. Gravel beaches are particularly vulnerable to fouling. The protected nature of Prince Wiliam Sound creates an environment with limited wave action to break up and disperse the oil. Subarctic temperatures slow the weathering process of the crude oil, slowing the release of the more toxic components and retarding overall degradation by normal chemical and biological processes. Because of these factors, the effects of the *Exxon Valdez* may be with us for quite awhile.

Mr. Chairman, we at NOAA intend to be participants in this effort for the long haul. This is without a doubt the worse oil spill that has occurred in the history of the United States, and NOAA has substantial capabilities that we are now using to address the critical problems caused by this disaster.

We will continue to assist the Coast Guard, the State of Alaska, and private interests in containing, and to the extent possible, repairing the damage done by this catastrophe.

The CHAIRMAN. Well, Dr. Evans, right on that point, now, what did we learn, let us say, from the *Cadiz,* which was a mammoth oil spill there on the coast of Brittany. For one, it took some five years to get the study.

Now that we have got the study, other than putting it into some library somewhere, what good did the study do?

Dr. EVANS. Well, I do not think I could address that. I could ask Dr. Ehler to, but let me respond to one other aspect of what you are saying is that—did you say that the *Amoco Cadiz* was a massive oil spill. It was minor compared with what we are dealing with here today, sir.

The CHAIRMAN. Minor. So, if you took five years for that one, how long are you going to take for this one?

Dr. EVANS. Just in order to be able to do assessments on the effect on salmon, we are going to be able to have to be looking five years downstream because some of these species will not come back as spawners for at least five years. So, if there are other long-term toxic effects that we do not know, it could be another five years beyond that.

The CHAIRMAN. What about it, Dr. Ehler? Do you agree with that assessment?

Dr. EHLER. Well, certainly there are many things that will be done in the short run and are being done right now. In fact, to complete a long-term assessment of some of these damages, it will take us anywhere between three to five years to see some of the longer term effects.

There are many short-run effects. The lethal effects are very visible right now. We are measuring those and we are documenting those. Some of the science will take longer.

The CHAIRMAN. And then what do we do after we have documented it all? You said you had 15 years experience. I am getting to the practical and the realistic result. I have done all the studying, and I have got it all documented and has that led to any kind of legislation, change of policy, better practices or what after your 15 years experience with the *Argo Merchant* and the *Amoco Cadiz* and all the rest of them? What have we learned?

Dr. EHLER. Well, I would say the immediate purpose of doing the measurements of environmental effects is to be used in the damage assessment which means putting economic values on those effects so that we can, in fact, file claims to recover some of those damages. That is the immediate purpose of doing science in the field right now and doing it in a timely way.

The CHAIRMAN. And what is the responsibility of NOAA or the government to file claims once the assessment is made?

Dr. EVANS. Once we have made the assessment for all practical purposes what we will do is we will present a bill to Exxon for what the costs of the damages are.

The CHAIRMAN. Is there any limit to that bill that you are going to give Exxon under the statute?

Dr. EVANS. No, sir, not that I know of. Is there a limit?

Mr. CAMPBELL. Under the Clean Water Act if willful negligence is shown, then there is no limitation to their liability. However, absent willful negligence, there is approximately an $8 million cap under the statute the way it is currently written.

The CHAIRMAN. Are you going to try the case in Alaska?

Mr. CAMPBELL. We will leave that to the Justice Department, sir. We are working in concert with the other trustees and with the Department of Justice in an effort to put together damage assessment, to put a value on the resources that are lost and to attempt to identify how best to restore those resources as closely as is possible.

The CHAIRMAN. Dr. Evans, why do you say the Amoco Cadiz was minor compared to this one?

Dr. EVANS. Well, let me refer back to some of the material in my testimony, Mr. Chairman. This is a very, very special part of the world. It is pure. It is a very steep bottomed area. The winds can come up very rapidly, as we saw in the one day, 50 mile an hour winds. It can be flat calm the next day.

We have high tides moving in and out of the area, 15 foot, 20 foot tides. It is the difference between having something in a bottle. I think if you are looking at the difference between a quarter pound piece of dynamite, it is the one thing if you throw it out in the middle of a field and let it blow up where it has a lot of place for that energy to spread to, but if you do it in an enclosed area, it enhances the impact of it, and I think that is what we have here is that the oil has moved around and with all of the little cubbyholes and various things that we have in the total shoreline in this area, there are going to be places where we are having potential effect on fisheries and others that we may not even discover for at least the next couple of years.

The CHAIRMAN. What is the potential effect, if any, on other shores? As I understand, the current goes north and cuts across the north—the Arctic and North Pacific. And could this reach Russia? Heavens.

Dr. EVANS. No, I do not believe so. The direction it is going right now is it is going on up the Kenai Peninsula headed towards, as Senator Stevens said, toward Kodiak Island. There will probably be, based upon what the current gets into, we could have tar balls ashing up on beaches all the way down into British Columbia. But we understand the direction, although the accuracy of our forecasting of the direction is based upon the wind and currents is best as we can give you about 24 hour for the trajectory.

I think on an overall basis we can have a pretty good idea of where we are going to see things wash up. At this stage I think it is pretty well targeted where it is going to be pushed. But as far as what we are concerned about right now is the immediate effects it is going to have in other places in Alaska.

Kodiak, as Senator Stevens says, is a very, very large area as far as fisheries go. We have some concerns at least I have some concerns because of my fisheries background is that if this gets in Chelekoff Straits, we have a problem there in that the pollock which is a multi-billion dollar resource is beginning to spawn, and we do not really know what the effect or the impact of this is going to be on that. So, that is a little scary. But that is a possibility, and we are tracking it very closely.

Budd, do you know, do we have any idea of what direction it is going to go past Kenai?

Dr. EHLER. It is generally going westerly.

The CHAIRMAN. Mr. Robinson.

STATEMENT OF STEVE ROBINSON, DEPUTY DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Mr. ROBINSON. I appreciate the opportunity to be here today.

The CHAIRMAN. See if you can move that microphone a little bit closer.

Mr. ROBINSON. I will talk about wildlife, the impact on the wildlife resources of that area. With me today, or at least available in the audience is John Martin, who is our manager of the Alaska Maritime Refuge, elements of which have been impacted by this spill.

The oil spill has had adverse and often fatal impacts on many species of wildlife in Prince William Sound. The Fish and Wildlife Service has management authority over migratory birds and sea otters, while the National Marine Fisheries Service has authority over other marine mammals and the fishery resources of that area. None of the bird species or the Alaskan population of sea otters, I should add, are listed under the Endangered Species Act.

The scale of the spill impact is just now starting to become clear to us. Our preliminary beach surveys have found 80 oiled birds per 100 meters of beach on the islands in the path of the spill. It is highly unlikely that most of the oil birds can be recovered and cleaned, although we are making every effort to do so.

We anticipate that 3,000 to 5,000 sea birds could be recovered and cleaned. Absent their being recovered and cleaned, a high percentage of the birds that become heavily oiled will simply not survive.

We do not at this time have any estimates of the likely number of birds that may be killed by the spill. I think in the next couple of weeks we will get better numbers on that figure.

Bald eagles have been observed scavaging oil-killed birds. Although no dead eagles have been found, the Service believes that toxicity connected to oil-soaked birds could kill bald eagles. There are approximately 750 bald eagles resident in the Prince William Sound area.

An aerial survey conducted after the spill counted 90,000 birds, half of which were in the area impacted by the spill. Aerial surveys are not expected to produce accurate total population counts since many birds and animals simply cannot be seen in the oil.

During this time of year there is a generally accepted figure of about 350,000 bird residents in Prince William Sound. As Dr. Evans has mentioned, other migratory birds are coming in as we speak and will add another 100,000 to that population.

In addition, over 100,000 birds nest in the Chiswell Islands, an element of the Maritime Refuge to the southwest of the sound. And the first streams of oil have already reached those islands.

The total sea otter population of the sound is estimated at 10,000 to 12,000, and the heaviest concentration, about half of those, is located in the southeastern part of the sound. This represents the highest concentration of sea otters. That population in the eastern area has not been affected by the spill as of yet.

Approximately half of the otter population in the sound is likely to be impacted by this spill. If the spill should change direction, of course, and go into the southeastern area, the situation would worsen dramatically for the otter.

The Fish and Wildlife Service presently has 24 people committed to monitoring clean-up and bird and otter rescue activities. We have two chartered boats and 16 people working to locate oiled otters and bring them to the sea otter cleaning facility operated by Exxon in Valdez.

We are operating constant aerial surveys of the Sound to monitor the movement of oil and its relationship to the sea bird and otter populations. These aircraft are also on the alert for oiled otters, and they then tell the ships in the area where the otters are for capture.

Under current wind and tide forecasts, the leading edge of the spill could reach Kodiak Island this weekend. Service personnel and others from the National Response Team are identifying and prioritizing those areas that could be protected in the islands.

Two service vessels are being moved into the area to support damage assessment activities. That is what we do under the laws that have been mentioned today. This will consist primarily of surveys—bird surveys, mammal surveys, and sea otters—to determine how many of those critters have been affected and how many have been affected adversely.

An assessment of the natural resource damages under the provisions of the Comprehensive Environmental Response Compensation

and Liability Act is being initiated. That is what our people are doing now. They are in the process of picking up the oiled and injured wildlife. They are also making counts to use in the future to gain compensation.

That concludes my prepared statement. Mr. Chairman, I would be glad to try to answer any questions you might have.

The CHAIRMAN. Senator Stevens.

Senator STEVENS. Mr. Chairman, on April 4, I received a prediction of the trajectory of the *Exxon Valdez* Prince William Sound oil spill from Dr. Royer. I have sent it to the various teams that are working on this. But I think it is very important to examine what he says.

It will take a couple of minutes to read it, but I think it is timely with these witnesses. Dr. Royer says,

> The oil spill in Prince William Sound will exit the Sound through Montague Strait and follow the coast to the west-southwest. It enters the Alaska coastal current, a relatively swift, low salinity flow that is driven by fresh water runoff and winds.
>
> The current is usually 5 to 10 miles wide, with surface currents of about .75 knots, plus or minus two-tenths of a knot, at this time of year. It might best be thought of as a river running along the coast. The oil should remain in this flow in a very coherent manner with little spreading across the shelf.
>
> The entrance of the oil into local bays will depend on local winds with offshore winds, of course, favoring no transport on shore. Easterly winds will accelerate the along-shore transport of the oil and will cause the oil to wash up on the exposed beaches.
>
> The oil patch or patches should be at the mouth of the Cook Inlet within six days—

And mind you, that is April 4th, he was talking.

> In six to ten days. It will probably be a series of patches extending from Prince William Sound to Cook Inlet.
>
> Once again, the amount of oil entering the inlet will be dependent upon the local winds at the time of arrival, but roughly half of the oil at the entrance will enter. The remainder will travel southward along the westward shore of Kodiak Island. Here the coastal current becomes less intense and cross-shelf mixing of the oil will take place.
>
> Some unknown fraction of oil entering Cook Inlet and on the shelf off Kodiak will continue down the Aleutian Island chain. Here the coastal current is not as intense, but a broad, diffuse flow, filling the shelf, rather than the narrow coastal flow as it is along the northern Gulf of Alaska.
>
> Some unknown portion of the oil, whatever portion remains in the water column, should begin to go through Unimak Pass sometime in June or July.
>
> That is the pass that the Bristol Bay fish run goes through in Bristol Bay.
>
> The upper water layers of the Prince William Sound region should be flushed in several weeks, though the deep waters, and I repeat this, the deep waters might not be flushed until fall when the deep water renewal takes place.
>
> The coastal flow increases in the fall up to 3.5 knots due to the annual precipitation cycle, and this should rapidly transport the oil out of the Sound to the west in the fall.

His predictions then, in interpreting them, mean that the oil should be in Cook Inlet, from sometime between April 10th and 16th. It should arrive at Kodiak sometime between April 14 and 21, and will be in Unimak Pass sometime in June, with the possibility of a renewal of all of this when the oil that has gone into the deep water column is disgorged from the Sound due to the fall runoff, which is intense. If you have ever seen that precipitation cycle, it is intense in the September-October period.

Now, gentlemen, what do you think should be done with regard to the areas beyond the damage to date? I mean we have not had

damage yet in Cook Inlet, we have not had any damage yet in Kodiak, we have not had any damage along the Aleutian Island chain coast, and particularly, we have not had any damage in Unimak Pass yet.

Have any of you any knowledge of any attempts anywhere in the world to try and change the flow of this oil as it streaks out in these long tendrils we saw of oil being wind-driven and current-driven up there?

Dr. EVANS. Senator Stevens, no, I am not aware of any. One of the things we were very interested in was the information that you presented from Dr. Royer. And, in fact, we were not familiar with that, but we are going to check with him. We certainly are very interested in any of the information he has.

One of the things we have been doing is that our models, interestingly enough, seem to agree very closely with the description that you just gave. And one of the things we have been doing is trying to get our teams—in fact, some of our members of some the teams—you were mentioning about some of the people are getting out ahead of some of these, and we are using this in order to make samples and make tests in the area for the damage assessment.

I know that does not mitigate what the oil is going to do in that area. But I think that there are people that have been placed in Seward and other places to try to put booms up in various areas, and to do whatever we possibly can to try to see if we can keep it out of the sensitive areas.

But other than that, I just think we are not experienced in mitigating it.

Senator STEVENS. Well, the thing that bothers me about the current control of the actions to be taken to prevent further harm, is that they are all related to damage control, they are not related to prevention.

Some of them are I guess. The booms are a preventative concept. But, for instance, I was told in one area that hay had been dropped on the beaches from the air before the oil hit those beaches. And as the oil came in, it hit the hay and the hay was raked up or cleaned up and burned later.

I asked if that was being considered for Alaska and I was told no. Then I asked about the use of a drift net, whether anyone had though of putting one of the 40-mile drift nets out there and sling it across this current and weight it down pretty heavily and try to put in absorbable booms behind it and see if it can pick up some of this slick as it moves towards Kodiak.

And remove the booms as they get oil-soaked and put new ones in. And I was told, no, that has never been tried, and we are not going to experiment.

Now, are you gentlemen going to experiment at all when this gets out in these open areas that are certainly beyond the Prince William Sound now, beyond the capability of anybody that I know of so far to come up with some suggestion.

Is there going to be any experimentation at all?

Dr. EVANS. Let me refer this to Dr. Ehler, since he is much more familiar with the program. But I am not aware of any experimentation, but I certainly would be in favor of it if it would increase our knowledge in any way of how to deal with this thing.

I do not know, we may have some programs going. I will let Dr. Ehler address that.

Dr. EHLER. I think those alternatives that Senator Stevens identified, to my knowledge, are certainly not being tried now. On the other hand, there are teams of people up there as you know who are running over virtually every possibility of mitigating the effects of this particular spill.

I just do not have the information about what is being considered right now. But I would suspect that all of those kinds of alternatives have been run over in some detail.

The CHAIRMAN. Would the Senator yield?

Senator STEVENS. Yes.

The CHAIRMAN. I monitored, Dr. Ehler, the Bantry Bay in Ireland, it was a refinery spill, and that straw protective procedure, to protect the beaches was used there, and very successfully.

Senator STEVENS. That is what I was told. And I was told, incidentally, that we had no market for hay this year, and so it is all up there, no one has even asked.

And the drift nets, you are responsible now for bringing the drift nets under the legislation this committee started. Several of them have been brought in. They are piled up somewhere, no one has even thought about trying to sling them out there and have them do some good.

They are very harmful, as we all know, to fish, but we could try. Mr. Chairman, there has been a complete unwillingness to try to experiment because of some reason, somebody says if they try and it does not succeed, who is going to pay the bill?

And secondly, will it increase the damages to Exxon or will they object? That is why we want the Coast Guard in control up there. But even then, you know, I do not think the Coast Guard really is thinking in terms of experimentation yet.

I have got to tell you, I wish we could get a plane and fly this whole committee up there and let them see what is going to happen to Kodiak. I think if anybody went up as I did and saw what I saw, they would come back as mad as I am.

And I am mad because no one is thinking of trying to stop this thing.

Now, Bill, you guys have got good brains, and you know, the group that is involved here, I know you all. And, Steve, you people know this area just like I know it. And there is no reason to accept as inevitable that this is going to destroy Kodiak fisheries. it is going to go down the chain. And it is going to go through the pass into the Bristol Bay salmon run.

That is unacceptable. We have got to try, even if you fail, you have got to try. And I do not know how to get you going. Is it money? I was told yesterday that all you need to do is ask Exxon and within foreseeable limits you could not dream of exceeding, money is available. They know they have got horrendous liability if this gets to Kodiak, just horrendous.

You can name them, the things that are over there, Bill: king crab, scallops, the whole fleet is over there now, sole, half of our sole now is coming out of the North Pacific. You name it, bottom fish, the home of the bottom fish is Shelikoff Strait, you closed it

once because it was so sensitive to the problems that were developing there.

Now I think we could safely say that this is the largest producing area for fisheries in the world today. It was healthy until March 24th. And people seem to just accept the inevitable, that we just cannot stop it.

Somehow or another we have got to get an attitude that we are going to try to stop it. I would hope that you would help us get some control. The Sea Fences, for instance, I heard about, have you ever heard of the Sea Fences?

Dr. EVANS. Yes, sir. I heard you this morning. I was here when they were talking about, that is the 42-inch boom.

Senator STEVENS. Well, I am told Norway has them in stock. They stock them as a matter of national preparedness, they are stocked over there. And they offered to send some over here.

I would have two C5–As on the way this afternoon if you could find them and try them.

The CHAIRMAN. What about it, Dr. Ehler? He is the expert on hazardous materials. Is there not something more that we can be doing from your point of expertise? It seems like there could be some more preventive measures being taken?

Dr. EHLER. I think there is always more that could be done. I think the point that has to be made is there is tremendous uncertainty about what is actually going to happen, and where this oil is going to go and where it is going to wind up.

Nothing is inevitable. There is a great deal of unknowns with respect to where the spill is moving, where in the water column it will be, what effects it will have on living resources in this area and in the areas further west.

Senator STEVENS. It is just like everybody, everybody has got to be somewhere, and this oils going to be somewhere for at least the next four or five months. Do you agree with that?

Dr. EHLER. Absolutely.

Senator STEVENS. The question is, trying to do something about that.

Dr. EHLER. I think there are a lot of people on the scene who are trying to do something about containing that oil in the first place, following and predicting where it is going to go, and minimizing the effects that it has.

Senator STEVENS. Do you know of anybody who has attempted to change the direction of it, in terms of the open spill as it is moving down the Alaska Coastal Current coming out of Montague Strait and going into the Gulf?

Dr. EHLER. No, sir. There is no one to my knowledge doing that.

Senator STEVENS. I do not know if anyone has even attempted, even experimented to try and change that flow.

Dr. EHLER. Again, I agree. There is no one.

Senator STEVENS. Now they have done a good job of trying to move them off specific areas. You people have done a real good job working with that Incident Response Team in what they have tried to do, in terms of protecting Resurrection Creek and protecting the Kenai Fjords National Park, and now moving in to protect the Homer area.

The Team, I understand, is moving over there now. I hope you do move it over. They want to go over there. And then we are looking even further to Kodiak.

But all of that is on the basis of how do we protect the beaches when it gets there. I do not know. Maybe we ought to take all the airboats from Frank Murkowski's part of the state and turn them around and let them blow that oil south.

Maybe people would be a little bit more worried about it if it was going south. They are not too worried about it when it is going north.

Now that is the problem and it is going towards the greatest salmon run, the greatest fishery run in the world today, probably.

You know, you have been up there. Now here is a salmon fisherman.

The CHAIRMAN. It is not going to ruin Clark's Point there at Ketchikan?

Senator STEVENS. No.

The CHAIRMAN. Well, we can end this hearing.

The hour is late. You gentlemen have been very obliging. The record will stay open for questions by the committee.

We appreciate the testimony here today. And I hope you appreciate the concern that we do have. And we will be working with you.

And do not let the budget hold you up. I want to know about that immediately.

I want to thank Senator Murkowski for sticking with us as well as Senator Stevens.

The committee will be in recess subject to the call of the chair.

[Whereupon, at 1:15 p.m., the hearing was adjourned.]

[The following information was subsequently received for the record:]

MARINE MAMMAL COMMISSION
1625 EYE STREET, N.W.
WASHINGTON, DC 20006

4 April 1989

Ms. Susan R. Lamson
Deputy Assistant Secretary for
Fish and Wildlife and Parks
U.S. Fish and Wildlife Service
Washington, DC 20240

Dear Ms. Lamson:

Aware as the Marine Mammal Commission is of your concern and responsibility for the Alaska sea otters being affected by the oil spill, these thoughts and recommendations are put forward in hopes that they will prove of value.

At least seven species of marine mammals inhabit or occur seasonally in Prince William Sound. They could all be affected adversely by the oil spill and related containment and clean-up operations resulting from the grounding and rupture of the supertanker Exxon Valdez on 24 March 1989. The species include: the sea otter (Enhydra lutris); the northern or Steller sea lion (Eumetopias jubatus); the harbor seal (Phoca vitulina); the harbor porpoise (Phoccena phocoena); Dall's porpoise (Phocoenoides dalli); the killer whale (Orcinus orca); and the humpback whale (Megaptera novaeangliae). In addition, many more sea otters and several other marine mammal species, including the gray whale (Eschrichtius robustus) and the northern fur seal (Callorhinus ursinus), could be affected by oil now moving towards the Gulf of Alaska.

Before specifically addressing sea otters, it may be useful to discuss possible effects of the spill upon all marine mammals in the area and some of the general needs of these species in terms of response actions.

Some effects of the oil spill and related operations may be immediate and obvious, while others may be less apparent and occur over long periods of time. For all of the species, immediate effects may include mortality or morbidity due to:

- contact with oil and/or chemical dispersants (most likely to affect sea otters and fur seals that depend upon fur to insulate them from cold water);

- inhalation of fumes as volatile components of the oil evaporate (could cause respiratory distress in all species);

- direct ingestion of oil and dispersants or ingestion of oil- or dispersant-contaminated prey (most likely to affect sea otters that could ingest oil in the process of grooming and eating shellfish from contaminated shellfish beds, baleen whales whose food filtering baleen plates may be fouled by oil and cause large quantities of oil or oil contaminated food to be ingested, and seals and sea lions that feed on fish that may have become easier to catch because oiling may have affected their ability to evade capture);

- disruption of the mother-pup bond and transport of toxic substances from parent to offspring through the mother's milk and from the skin/fur of an oiled mother (nursing seal, sea lion, and sea otter pups, and cetacean calves); and

- increased vulnerability to predation (sea otters, sea lions, and seals preyed upon by killer whales, sharks, and eagles).

Long-term effects on all species may include such things as premature pupping, increased incidence of spontaneous abortion, congenital and genetic birth defects, mortality, and morbidity. These may be caused by such things as direct exposure to toxic dispersant and hydrocarbon compounds, eating fish and shellfish that have picked up and accumulated toxic compounds by absorption or ingestion of tainted prey, starvation due to reduction of food supplies, and destruction of kelp beds which may be essential for successful rearing of sea otter pups.

Given these potential effects, it is clear that several types of response actions are required:

1. animals in danger of death due to contact with oil must be located, cleaned, rehabilitated, and held until fit for release either at the original capture sites once the spill is cleaned-up or in new, uncontaminated areas;

2. beach, boat, and aerial surveys must be conducted to determine when, where, and how many animals may have been exposed to spilled oil, and how many are killed or debilitated by the contact;

3. complete necropsies--including histopathology, toxicological screens, and stomach content analyses--must be done on representative samples of all species found dead in or near areas exposed to oil or dispersants to document cause of death (this program should be initiated immediately and should be continued periodically until there is no discernible evidence of anthropogenic hydrocarbon compounds in tissue samples from animals found dead in areas affected by the spill, or in the marine food webs of which the various species are a part);

4. directed and opportunistic studies should be done to:

   a. test and evaluate possible alternative methods for preventing oiling and for capturing, handling, cleaning, and rehabilitating oiled sea otters, sea lions, harbor seals, and fur seals;

   b. determine how various species behave in the vicinity of spilled oil and containment/clean-up operations (e.g., do animals appear able to detect and avoid, or are they attracted or indifferent to, spilled oil and containment/clean-up operations; what happens to animals after they are oiled--do they remain in or move from areas where they were oiled, do they haul out on land, do they groom and ingest oil in the process, do they die and sink to the bottom or float);

   c. determine whether various species are more or less likely to eat oil contaminated or uncontaminated prey (e.g., are there any indications that oil affects fish in ways that make them easier to catch and more likely to be eaten by seals, sea lions, and cetaceans, or that any species refuse to eat oil-contaminated prey); and

5. long-term (five-, ten-, twenty-year) studies must be designed and carried out to determine (a) the chronic, long-term effects of the spill on various species and key components of their habitat; (b) how the spill affected the demography and reproductive capacity of the various species; and (c) the manner and rate that the affected species and habitats recover from the impacts of the spill and associated activities.

While the foregoing comments are applicable to all marine mammals likely to be affected, the Service's primary responsibility clearly lies with sea otters. Because sea otters depend upon fur for insulation, they are the species most likely to be adversely affected by contact with spilled oil.

In 1985, Randall W. Davis, Ph.D., and colleagues at Hubbs Marine Research Institute in San Diego, California, carried out a study, under contract to the Pacific Office of the Minerals Management Service, to develop and test possible methods for restraining, cleaning, and rehabilitating oiled sea otters. The study results, described in a May 1986 report to the Minerals Management Service, indicate that oiled otters can be effectively immobilized for cleaning using a combination of meperidine hydrochloride and diazipam and that oil can effectively be removed from immobilized otters by washing for 40 minutes with a 1:16 solution of Dawn liquid detergent in water, followed by 40 minutes of rinsing with a shower head under moderate pressure.

Cleaning removes natural as well as foreign oils and, following cleaning, the otters must be dried, kept warm, fed, and given veterinary care to prevent or treat hypothermia, shock, and secondary disease, particularly pneumonia. Recovery from the stress of oiling and cleaning takes one to two weeks, providing no secondary medical problems develop. This suggests that animals must be kept in holding facilities for one to two weeks before release to insure a reasonable probability of post-release survival.

In addition to the fact that the restraint and cleaning techniques being used have not been tested under field conditions before, there are other uncertainties. It is not known, for example, whether oiled otters are likely to remain in oil contaminated areas, haul-out on land, or attempt to find and move to oil-free areas. It is also not known whether oiled otters can be captured effectively, using standard capture techniques, before they are so debilitated that successful rehabilitation would be unlikely; whether there is some critical time period after which rehabilitation efforts are likely to be unsuccessful; and whether otters that die as a result of oil contamination are likely to be found hauled out on remote beaches, found floating in the water, or not found at all. Consequently, there presently is no basis for predicting what proportions of oiled otters are likely to be found, either dead or alive, or for predicting what capture, cleaning, and rehabilitation techniques most likely will be successful.

To resolve these uncertainties, while at the same time capturing, cleaning, and rehabilitating as many oiled sea otters as possible, the Marine Mammal Commission recommends that the following be done:

1. aerial and/or boat surveys be conducted to identify (a) areas where sea otters have been and are being oiled, and (b) areas where sea otters have not yet been, but are likely to be, oiled;

2. a representative sample of sea otters be radio-tagged and followed in one or more areas where otters have not, but likely will be, contacted by oil to determine what otters do and where they go after they are oiled (e.g., do they haul-out on remote beaches, do they ingest significant quantities of oil while grooming, do they remain at sea and sink or float after death, and are they eaten by eagles or killer whales);

3. benthic communities be sampled in one or more of the selected study areas, before and at periodic intervals after the areas are contaminated with oil, to determine how the quantity and quality of sea otter prey (food) species are affected by the spill and related activities such as the use of chemical dispersants;

4. scientists familiar with the seasonal distribution and movements of sea otters in Prince William Sound be consulted to identify important feeding, resting, and breeding areas that possibly could be protected by deploying oil containment booms, and, where feasible, containment booms be deployed to prevent oil from reaching these areas (this and the succeeding task should be afforded high priority if oil threatens high density sea otter areas in Prince William Sound or the Kodiak/Afognak Island area);

5. a contingency plan be developed, and necessary authorization be obtained, to capture and relocate large numbers of otters in the event that the spill approaches high-density sea otter areas in eastern Prince William Sound or the Kodiak/Afognak Island area and thus threatens to jeopardize the continued existence and viability of these sea otter populations;

6. an additional facility or facilities be established to clean and rehabilitate oiled otters (the Valdez facility may well not be able to handle all the animals that are oiled, and it may be useful to have a similar facility in Cordova to take care of animals nearer there);

7. scientists, technicians, and veterinarians, including the Fish and Wildlife Service's southern sea otter group, who are experienced in capturing, sedating, cleaning, and caring for sea otters, be brought in to staff the facility(ies), train volunteers, and assist in capture/transportation activities;

8. a sufficient number of boats and aircraft be dedicated to searching for, capturing, and transporting oiled sea otters (and other marine mammals and sea birds) to designated rehabilitation centers; standard procedures be established for reporting and responding to reports of oiled sea otters; and possible alternative methods for capturing, handling, sedating, cleaning, and caring for oiled otters (and other marine mammals) be evaluated and kept under continuing review;

9. all otters handled be marked with individually recognizable tags, and a subset of rehabilitated otters be radio-tagged and followed after release to determine what proportion survive and whether any or all of the animals attempt to return to areas where they may again be oiled;

10. persons with first-hand knowledge of the distribution, movements, habitat requirements, and historic range of sea otters in Alaska be consulted to identify areas that may be suitable for releasing rehabilitated otters;

11. a veterinary pathologist be on site to do necropsies and properly prepare and preserve specimen materials for subsequent laboratory examination so as to try to document cause or causes of death; additional veterinarians, experienced in sea otter biology and medicine, be brought in, if needed, to assist with rehabilitation efforts and necropsies; tissue and stomach content samples be collected, under the supervision of a veterinary pathologist, and provided to the Fish and Wildlife Service's Veterinary Services Laboratory in Madison, Wisconsin, or other qualified, independent laboratories, to conduct histopathological and toxicological analyses; and this work be continued until there is no evidence that oil or chemicals used to disperse the spill are causing or contributing to sea otter mortality;

12. skulls and reproductive tracts be collected from all otters found dead in or near areas contacted by the oil spill; and these be examined by qualified biologists to determine the ages, reproductive history, and reproductive condition of the animals at the time of death;

13. beaches where sea otter carcass counts have been conducted in the past be identified and walked periodically to gather information on the number of animals dying or washing up dead on these beaches; and these data be compared with data collected previously to estimate the increase in mortality rate and total mortality possibly attributable to the oil spill; and

14. a planning meeting or workshop--to include outside experts as well as marine mammal biologists from the Fish and Wildlife Service, the National Marine Fisheries Service, the Alaska Department of Fish and Game, and the Marine Mammal Commission--be organized and held within the next three to six weeks to (a) identify the types of studies needed to document the long-term effects of the spill on sea otters and other marine mammals, and (b) describe the time, money, and special logistic support needed to do the necessary studies.

Most of the preceding recommendations were first provided to and discussed with the Regional Director last Friday. The Commission continues to believe, and this view was made known as well, that all haste should be made to bring members of the U.S. Fish and Wildlife Service's California staff and others in California, who are familiar with the care and handling of sea otters, to Alaska. This will provide trained personnel either to assist at the existing cleaning and rehabilitation station, to establish one or more additional stations, to undertake tagging (already authorized under a Marine Mammal Protection Act permit) of sea otters as a part of an experimental effort to determine and better understand the impact of the oil spill, or to assist with others of the activities described above.

Our major concerns relate to: minimizing the number of animals that are oiled; catching, cleaning, rehabilitating, and releasing animals that are oiled; documenting the numbers of animals killed and debilitated, now and in the future; documenting the cause(s) of death through proper necropies and collection, preservation, and examination of specimen materials; the collection and archiving of data and information in such ways as to maximize their value in future spill prevention and spill response efforts; and evaluation of containment, clean-up, and mitigation measures to effect improved responses in the future.

Sincerely,

John R. Twiss, Jr.
Executive Director

cc: Mr. Walter O. Stieglitz, Regional Director, Alaska

L. R. RAYMOND
President

April 19, 1989

The Honorable Daniel K. Inouye
United States Senate
Room 722, Hart Senate Building
Washington, D.C. 20510

Dear Senator Inouye:

This is in response to your letter of April 7, 1989, requesting a report on two recent oil spills in Hawaii. We can only fully address the first of these which involved our tanker, the EXXON HOUSTON.

On March 2 the EXXON HOUSTON, a vessel owned by the Exxon Shipping Company, was discharging crude into the Pacific Resources Inc, (PRI) refinery through PRI's offshore mooring at Barber's Point, Oahu. The weather conditions were high winds and sea swells. While the PRI mooring master was aboard the ship, PRI's mooring chain parted and the unloading hoses broke, releasing 600 barrels of crude into the sea. Before the vessel could be brought under control, it drifted on to a coral reef resulting in the loss of an additional 200 barrels of bunker fuel. The vessel was freed on March 3 and the remaining cargo removed without event.

Exxon's casualty response team responded immediately. All equipment and personnel were promptly assembled to manage the spill. Based on the proximity of the vessel to the shore, the sea and weather conditions, subsequent over-flights, and recovered oil analyses, the spilled oil that did not naturally dissipate was recovered in the shore cleanup effort.

You also noted a quantity of oil, estimated at 10,000 gallons, washed ashore more recently. We have been informed by the Coast Guard that the freshness of the oil and the current charts would indicate that the possibility of that oil originating from the earlier EXXON HOUSTON incident is extremely remote.

I trust this information responds to your request. We, at Exxon, are distressed about the Alaskan incident and are committed to a thorough and effective cleanup.

Sincerely,

Lee Raymond

EXXON CORPORATION • 1251 AVENUE OF THE AMERICAS • NEW YORK, NY 10020-1198